SOCIAL THINKING

HYMAN LEVY

BOMBAY
PEOPLES PUBLISHING HOUSE
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CHAPTER ONE

A PERSONAL EXPLANATION

I SPENT the first twenty years of my life in Edinburgh. To the casual visitor, especially in the spring or summer, Edinburgh is a beautiful city, sweeping around the foothills of the Braids, the Blackford Hill, the Calton Hill and the Pentlands. It has lovely gardens and spacious parks. It has museums, libraries, university buildings, and a plethora of historic monuments and their associations. It is steeped in Scotland's past. The Castle Rock towering over the centre of the city springs first to the memory of those who have left their native town, as it holds the eye and the imagination of the visitor.

In my day in the early 1900's, to a large section of the natives, including myself, it was a terrifying city. On a Saturday night, to walk down the High Street was to stumble over the drunken forms of men and women lying prostrate on the pavements— often with little babies clambering over their drink-sodden bodies. A journey through the Grassmarket or the Cannongate on almost any night was a hideous nightmare of drunken brawls. Grimy children in the tattered remains of their parents' clothes, scrambled, cursed, and blasphemed everywhere amidst this monstrous depravity, already old in vice before they had even approached adolescent stage. Poverty and misery abounded. While still a child I slept on a makeshift bed of wooden boards behind the door of a small shop, tensed up in an agony of terror as I listened, well into the morning, to the cursing and quarrelling of the habitues of the public house on the opposite side of our narrow mean street. I heard their bodies and their fists smash against the wooden door within a yard of where I lay, while I prayed and entreated God to send them home. The prayers were useless. They were there again the following night.

Within the first fifteen years of our lives, we learnt all there was to know of vice and the social degradation of an underpaid, under-educated, overworked industrial population.

They were a ricket-ridden, underfed, underclad, collection of youngsters who attended our very proletarian Board School; at home herded together like animals, at school taught in droves of sixty or more. Many were highly intelligent; at the worst they were cute and cunning. Survival demanded it. By six in the morning they were already delivering newspapers and milk. After school hours they rushed straight off as message boys for a few pence per week. It was a hard life, but we learnt a wisdom and an understanding of human beings infinitely deeper than anything preached to us at school, church or chapel, by adults who were not of our class. We could see right through teachers and preachers alike. Highly gifted boys and girls less fortunate than myself at picking up bursary or scholarship, drifted out as early as possible to casual employment, anything that for the time being would bring in a few shillings per week to supplement the twenty shillings or less earned by the parents. By six o'clock on frosty winter mornings I would hear the clump, clump of the mill workers' clogs as they trudged in the half-light to their day's work; and twelve hours later I would meet these weary people returning to their overcrowded tenements.

During my school years I spent the evenings working with my brothers and sisters in my father's back shop, a mean little den where we pasted the backs of picture frames, and spread the damp brown paper covering that was to keep out the dirt and grime. We sprigged up the backboards until our small finger nails that guided the metal sprigs into place were hollowed at the centre. After that I attended the Hebrew school, fighting my way into it through a crowd of anti-Semitic young hooligans who crowded the entrance for the evening's sport of Jew-baiting. In these scuffles we lost our teeth and blackened each other's eyes. Even so we did not feel it was unfair. It was simply a normal part of the wider struggle between death and existence that went on all around us. It was merely the way the Jewish boy came into the picture. But even at that age I appreciated something of the way in which external pressure welded the Jewish population together for protection, and so sharpened their separateness. Play came at weekends, in the dark, dirty entries leading to the noisy, smelly tenements and slum dwellings, and in the narrow streets littered with horse manure and a

wide variety of interesting refuse. God knows what the poor, decrepit rag-pickers and tramps found of value as they raked with their frozen fingers through this mess of muck and broken bottles. That also was Edinburgh, as it must have been many other cities. Years afterwards I discovered the countryside.

I am not complaining. It was an education and a revelation. It taught me many things I might never have learnt, but it left many scars. What I felt most keenly at the time was the loss of those bright and gifted companions of my schooldays who drifted into casual and blind alley employment; boys with a gift for verse—frequently obscene—for drawing, and, when colours could be found, for painting; boys with a capacity for organisation, with inventive genius, chess and draught players, voracious readers of everything offered us by the ill-stocked local public library.

I know that this picture can be matched and eclipsed by those of hundreds of thousands of others of my period and of this. But I would not be honest with myself if I did not recognise that it has left a deep and permanent impression. It was all so hateful and so cruel. To see children with terror-stricken faces cling to their parents as they fought and scratched in their extremity of poverty, depravity and proximity, was a crucifying experience for a sensitive child—and all children are sensitive until their finer feelings become dulled by the very bitterness of the struggle.

As I grew older, what amazed me was the placid ignorance of a large section of the population, of the terrible tragedy that was daily enacted almost under their eyes. I found it difficult to understand how people, otherwise quite decent and considerate, could be so callous as to remain indifferent and aloof. When, as a student, I heard it argued that one's life should be devoted to science or art *for its own sake*, and that nothing else mattered, I could only gasp in astonishment. These people seemed to speak a different language from me. To-day I am no more astonished. I can understand how and why such attitudes are adopted. Much as I have loved the study of science and mathematics, it has been difficult at times to be patient with colleagues who could

be content to spend the whole of their active life completely absorbed in abstruse problems of almost purely intellectual interest while, outside their study door, humanity was rotting away, and the world was slowly and relentlessly slipping into yet another devastating war. Archimedes was held up to us at school as an example of devotion to culture in that even while the barbarians were sacking his city, he continued to sit on the pavement, chalk in hand, absorbed in a mathematical problem, until he was stabbed to death. I could only wonder that anyone so unimaginative and unrealistic could be held in such esteem. So have I felt at times with many of our outstanding men of science, art and philosophy. They were more intent on chasing the shadows than catching the substance. Not that I underestimated these cultural pursuits. On the contrary I valued them so deeply that I felt they could not be enjoyed unless they had been fought for, not merely accepted; otherwise they are mocked by the hateful reality underneath.

Human beings in my experience seek finally to snap the chains that drag them under. So it was also in that strange submerged section of Edinburgh life. On Saturday evenings the Tollcross was a street centre for Rationalist debate to which I listened with avidity. On Sunday nights the Mound, an open forum next to the Art Gallery and flanked by Princes Street Gardens, became a hotbed of political discussion and social analysis. Here a vast crowd, sober, washed, and clean-collared, foregathered to listen to speakers of all political complexions. To one hardly more than a schoolboy, seeking to find a clear and simple explanation of what this cursed and cursing life meant, it was little more than a babel of tongues. How was one to disentangle the respective differences, if any, of the British Socialist Party, the Socialist Labour Party, or the Social Democratic Federation? Time and again, with a copper I could ill afford, I bought a penny pamphlet with a picture on the outer cover of a heavily-bearded gentleman called Karl Marx. This I took to the public library where there was at least light and heat, and read slowly and carefully; but it beat me. I could not understand the language in which it was written. Phrases like the "organisation of the proletariat on the industrial field" conveyed nothing to me. I knew the proletariat only too well,

but the word was not in my vocabulary. The industrial field was too figurative for one who had no idea that industry could show some kind of structure. Here and there I stumbled on sentences that seemed to have a meaning, and these I read and re-read in the effort to make my own what message they might contain. Looking back on it I can see how weak and pitiful were our efforts to educate ourselves, and to put in a rational form the meaning of the experiences that had burnt so deeply into us. The content was there; the form was wrong.

Finally I had to do it for myself, but it took me years before I felt that at last the pattern of social life with all its struggles and unevenness could be pieced together into a consistent whole. Like a picture-puzzle cut across in all directions, slowly and steadily sections began to stand out, until at last the underlying motif of the whole panorama of history began to take shape. My school history did not help me; it made no contact with reality as I knew it. How could I possibly be other than confused, when encouraged to feel a romantic admiration for Bonnie Prince Charlie, suffused with a music I loved, and at the same time urged to feel loyal and patriotic to the descendants of the Royal House that usurped his crown!

In another sense it was easy for me; I might find myself wrestling with a false theory, but no false theory could wash away the fundamental problem that cried out for solution. Every theory of a social nature that I encountered could immediately be put to the simple test—did it recognise the brute fact of the existence of an oppressed class? Did it see that you could deprave people by oppressing them? To me it was obvious that every analysis of society had to begin by recognising this sharp class division that existed within it. This gave me my starting point, and advance in understanding clearly lay in the direction of explaining how society had created this class division with all the horrors of its accompanying class struggle. When, in later years, people more fortunately placed than I had been—or perhaps, in a sense, less fortunately placed—denied the existence of class and class struggle, I could only marvel at their ignorance of the community in which they lived.

It has not been easy to be a socialist in academic circles for the past twenty years or more, especially for one with a strong proletarian background. The professions tremble too closely on the brink of the working class, and aspire too anxiously to be regarded as the co-equals of their social, if not intellectual, superiors, to tolerate the suggestion that their position is in fact precarious. The tradition of science *versus* politics as against science *cum* politics, has been very strong, and those who dared to defy this tradition ten to twenty years ago did so at their professional peril. But after all individual advancement is a trivial thing when set side by side with the slums of Edinburgh and Glasgow. It has been much easier since understanding began to spread, and some of the bolder spirits have spoken up. Professional men have had to be dealt with very gently! They have been slow to appreciate, for example, that science has social implications and that certain aspects of science have to be viewed in this context. Most of them have never troubled to look at Marxism as seriously as they would examine the most trivial of their scientific problems. They tend to accept without question the biassed judgment that it is pseudo-science, and in so doing fall far below the professional and ethical standards they are so scrupulous to observe in their own immediate domain. This is not dishonesty; it is lack of imagination. But the constant reiteration of certain themes has had its effect—the contradiction between Poverty and Plenty, Nazism or Fascism as a danger to freedom in science, the modern trend of scientific practice towards destructive rather than constructive ends. Gradually it became clear that all these were in fact aspects of the same underlying social difficulties, and this has been reinforced by the rising tempo of war and social oppression. The change in outlook in the past ten years amounts almost to a revolution in thought.

In another sense it has been easy to be a socialist among colleagues who looked at one askance for one's professed political views. It has been easy because a Marxist could understand why they looked at one in this way; and one knew also that as the social crisis deepened their attitude also would change. In their anxiety to keep science pure and undefiled from politics they would finally be compelled to seek political action. Marxism made the contradiction clear

from the beginning, explaining as it did just why and how the crisis would deepen.

It is with all this in my mind that I have written this little book. It is not a deep book, and is not intended to be so. What may seem surprising to many is that attempting to understand the social problem it should be necessary to begin so far away from the main task. Unfortunately our political tradition is unhealthy. We expect a member of Parliament to be able to provide a ready-made complete and compact solution to any and every social and industrial problem that presents itself. A moment's thought should tell one that every such problem is far too difficult for most members of Parliament to be able to understand. They are too busy sitting on committees and answering letters from their constituents so that they may continue to hold their seats, for them to find time to think and to read. It would be interesting to know, for example, what writings, analysing social and industrial issues, members of the Chamberlain Cabinet read—and yet that Government was making decisions on matters that struck right down into the fundamentals of society. To understand the movement of events within one's own continent and across the whole globe is a first essential in the modern world if one is to be able to foresee what the future holds, and so to be able to make the necessary preparations. If modern war is global so also is modern peace. This understanding is not attained by looking at detail with blinkered eyes through a microscope. The detail can be understood only by seeing it within the broader setting. It follows that social and political analysis demands a philosophical approach; not *any* philosophical approach that can be fabricated or invented, but that approach which the changing world forces upon us. *Philosophy, like science, has to be discovered, not invented.* To think and judge, to feel and value, to speak and explain, to do and undo, are human reactions in a changing world. They also change the world. All these are involved in political and social movements that make up what we call history. Unless their inter-connections can be seen, the whole thing becomes a meaningless jumble of occurrences where slumps, booms, wars, wealth, poverty, misery, emerge out of the nowhere, and those who profess to handle them might as well admit they are blindly playing with

human agony. Try to picture the social warfare that was waged in peace time against the dwellers of the slums of Edinburgh, Glasgow, Manchester, Belfast, Birmingham, Newcastle, Liverpool, London, and indeed of every industrial modern town, and you will realise that if you can put yourself right by that it will be worth while beginning a considerable distance from the problem itself. But the social struggles of my boyhood dwarf into insignificance compared with the slaughter and destruction of the greater wars. To live through the blinding and maiming of inoffensive young men in the last war was bad enough. To realise that it represented a "boom" in production was a horrible thought, if no more. To watch with politically mature eyes the torture and misery of millions of unemployed and their dependents in the intervening restless years between the two wars, to listen to cheap gibes about the workless, the won't-works, the unemployable, the agitators, the reds, was to resent bitterly the continuance of war as class war during the long years of industrial slump —war on the workless class. Finally to see the wheels of industry speed up once more, with all their infinite capacity and ingenuity in output—to know that this new boom has happened only because the slaughter has begun to move to a new climax, is surely to force from the lips of every decent person the query, "What kind of a people do they think we are to tolerate a social system that can function at its best only when it is destroying us?" Surely it is worth while making an effort to master this problem once and for all.

For most of us, the trouble is that we get caught up in a web of confused thinking. We mistake prejudices for clear thinking. While we may see the prejudices of others we remain quite unaware of our own. We cannot see that we are so like other people that if they are prejudiced, probably also so are we. We repeat phrases and judgments uncritically. We are assured that "Indians are not logical," and so you can do nothing with them. What do people know of the contributions of Indian scientists and mathematicians? Yellow men are naturally cunning, and, like the monkey, imitators: Jews have a natural attraction for money and business; the German is a first class, but unoriginal organiser; the Russian is original, but has no power of organisation; the British are natural colonisers. We know it is a hotch

potch of prejudice, at best an unconscious attempt to justify something else that is not mentioned—the lower status of the African, the subjection of the Indian, antipathy to the Soviet system, and so on. If we are to understand these problems we have to tear such prejudices out by the roots and examine them objectively.

If you are afraid of the consequences, don't read this book; but at least save your soul by admitting that you are afraid of the consequences. It may mean hard work, it may mean self-sacrifice, but at least you will be rescued from a second-hand life.

CHAPTER TWO

REMARKS ON DIALECTICS

Change is universal, and ever present. Nature, with its seasons, its fickle climates, the growth and decay of its vegetation, its birth and death of animal life, is perpetually transforming itself in every detail. We are born, we become adults, wax old, and die. Our thoughts and our feelings go on, never the same from one moment to the next. Everything we see, hear, do, and have done to us, makes us different. To-day, families are broken up, villages are in ruins and towns burnt to the ground. The face of whole countries is being transformed in a matter of weeks, millions of people rendered homeless, their way of life destroyed, and the very modes of their existence undermined. Change is not only universal and ever present, but to-day occurs with unprecedented speed.

Dialectics is concerned with the nature and meaning of such changes. It sets out those features of changes that underlie its many forms, physical and material, human and personal, civic and social. When its analysis is understood and its lessons applied, the unexpected in life becomes the expected, the seeming strange becomes the familiar, and the future is shorn of its terrors. For the present is the clay out of which men mould the future they need.

Why is it called dialectics? The reason is simple. One hears of the dialectical skill of a speaker, of his powers of reasoning, of his ability to change the outlook of his audience. The name therefore draws attention to the changes that occur during thought and discussion, one of our most familiar experiences. Under the impact of dialectical argument, we say we have changed our minds; meaning thereby if we really appreciate what we say, that a change has occurred in us. As we shall see, the features of dialectical change show themselves very obviously in thinking and in discussion. That is only one form. They can be discerned in all forms of natural change; transformations in the world of non-living matter, in personal relations, in large scale social changes. It is because *dialectics* was first developed in relation to thinking and discussion that the same term has been retained to refer to the much wider problems of natural change in general.

The purpose of this small book is to present an elementary treatment of dialectics for those who are prepared to take the trouble to study it seriously. In setting out on this task there is a definite limitation which has to be recognised from the beginning. Human beings are agents of change. It is they who make human history. History in general is the record of change, whether it be natural history or social and and political history. Human activity cannot therefore be left out in any discussion of dialectics. By human activity we mean the actual practical job of doing and making things. A book can only *talk* about this. It cannot *do* it. The doing of a task is not a book matter; and yet dialectics, as we shall see, necessarily has to link the *theory* of changes with the *making* of changes. It is in this sense that a book on dialectics must fail. It may succeed if after mastering its contents, the reader is urged to put its lessons into practice. The reader will then *work out* a last chapter.

Dialectics is then both the theory of change, and the practice of change-making. Where, it may be asked, can this theory be seen in concrete application? As this book develops, two aspects of nature will be seen to reveal their dialectical structure. On the one hand we shall discover that those aspects of the world that have been shown to reveal

scientific law, pass through changes in conformity with dialectical principles. This does not mean that dialectics stands out above nature like a god dictating how it may or may not behave. On the contrary it is directly from a study of nature and its changes that we derive our understanding of dialectics. There is no other source. It is the same source from which all scientific understanding is aroused. The subject matter of science covers the *facts* of change and the *relations* between particular sorts of change. These relations are also facts. Dialectics is concerned with the *nature* of change and therefore underlies all scientific work. For that very reason it enables all branches of science to be seen as a unity instead of as separate and distinct fields of enquiry.

On the other hand we shall see how an understanding of the principles of dialectics has enabled those who have it to mould nature to their will, and to build up social life in a constructively planned and scientifically intelligent way. The growth and development of the U.S.S.R., and its achievements during the past quarter of a century, are the most spectacular illustrations of the application of dialectics to social construction. It is there that we see the most complete interplay between theory and practice on a scale not hitherto attempted or surpassed in the history of man. We can see it again, perhaps, in its most dramatic form, in the way in which the Soviet peoples faced the terrible emergency of war, in the way in which they approached the problems of war organisation, war strategy and tactics, and in the way in which the powers of resistance of the people were evoked. If we are to seek those who have the deepest and the widest experience of dialectical practice, it follows from what we have said, that we must expect to find them among the men and women who have laboured and toiled to build up the first Socialist Republic, and who have put everything, their material gains, their dialectical understanding and their mental and physical energy as one people to the defence of that Socialism which means so much for the future of civilisation.

CHAPTER THREE

FACTS, STATEMENTS AND CONTRADICTIONS

You cannot completely define a man, a horse, labour, science, capitalism, socialism, a bolt, or any other thing or process that exists in the world. It is too complicated; it has too many aspects, many connections with all the rest of the world. But you can draw attention to one or more sides or aspects by means of a definition.

For example:—

A house is a building within which people live.

A house is a combination of bricks, mortar and wood, having doors, windows and rooms.

A house is a certain portion of a street.

A house is a meeting place for friends.

A house is a form of investment for property-owners.

A house is a place in which the occupier may always insists on having privacy for himself. It is a private dwelling.

A house is a commodity that is bought and sold on the market.

When we say people are talking at "cross purposes" we usually mean that they are taking different aspects of the same thing to define the subject matter. For instance, if we say: "A socialist is a person who *believes* in the common ownership of the means of production," and we contrast this with "A socialist is a person who *works* to bring about the common ownership of the means of production," we can see at once that the first definition lays stress on what the individual *believes* quite apart from what he does, whereas the second stresses what the individual *does* quite apart from what he believes. For the moment we are not concerned to give a fuller definition. All we require to see is that if two people are arguing on such a topic as socialism they may be at "cross purposes" precisely because they unconsciously have different definitions in mind.

Definitions may, therefore, focus attention on shape, size, motion, colour, smell, what it is used for, what it is made of, what it is intended to be, etc., etc.

What is Assumed in a Definition?

If you try to define a safety-pin you will find yourself talking about a *wire* bent round to form a *spring* and used for *fastening.* So with every definition. It describes the thing defined, in terms of other things and actions already known to exist in the world. The definition is correct or true if the things or actions referred to in the definition are actually present. The test is made by actually checking up. There is no other possible test; and it is one all human beings use. We ask: "Is it a wire? Is it a form of spring? Is it used for fastening?"

Every definition of this nature may be misleading in the sense that it deals only with a few aspects of the thing defined; the falseness would lie in the suggestion that the definition is or would be complete. The test of its falseness lies in examining the object or process defined, and discovering aspects of it which are not referred to in the definition.

What is Matter?

It is worth while saying a few words about this question because it is raised so frequently in a confused way. The remarks we have made about definitions should help us in this. We have said that a definition describes the thing defined in terms of other things and actions already known to exist in the world. Are we then here expected to define matter—in terms of—what? Something non-existing? Something that exists but is non-material?

First let us look at the ordinary scientist's approach. When he asks the question, it is obvious from what he does that he is really enquiring:—

What are the various forms of matter? How is it related to energy, for example? What are the "simpler" elements into which it can be broken up? Are there a definite number of such simple elements? What are the more complex forms into which it can be transformed through the agency of man?

What are its properties? It persists in time, it changes, and it has location in space. Is there any one property—say inertia—which all forms of matter possess? There is no limit to such detailed queries. The scientist asks the question therefore as a stepping stone to further knowledge about a given universe. This is indeed all that can be done with the question. More fundamentally therefore the scientist accepts the description:—

Matter is the objective reality of the external world which exists independently of our consciousness, and is reflected in our consciousness (Lenin). All scientific formulations assume this. Any "definition" of matter can be only partial—treating some one aspect of it that is important for us at the moment.

The impossibility of providing a complete definition or description of anything in a limited form of expression, therefore, arises from the many-sided inter-connections of any particular thing with its environment. For instance, it may be one of many such—it is *like* the others. It falls into many classes, for it is, say, wooden, metal, glass, rock, round, flat, transparent, dark, red, black, etc. . . . or it rests on something, or it is one of a group, or it is itself composed of parts and is a group. In its history it is related to other things, to the tools used in making it, to workmen and so on. If it is an idea, it has been or is being thought of by someone, it has been suggested by some situation, it implies or suggests some other idea, or arouses some feeling or some action. It never stands by itself. It is a part of the universe, and, however remotely, it is connected or linked up with everything else in the universe.

Exercises

Take the following illustrations and point out some of the things, ideas, feelings, activities, with which they are connected. Then try to give one or more definitions for each:—

Baby, wage, Nazi, cow, tractor, telephone, doctor, poet, co-operative society, Spain.

One way to form a definition is to give a description of the circumstances in which to use a certain word. If you define a screw or a hammer you are telling others in what circumstances to use the word screw or hammer. This becomes clear if you will imagine yourself teaching a foreigner English. You may show him a hammer, show him how it is used, and then say the word hammer.

Define a shovel, a boot, a Tade Union, in each case considering only:

(i) What it is made of.
(ii) What it is used for.
(iii) Who made it or how it came into being.
(iv) The circumstances in which the word or words should be used.

Facts and Supposed Facts

A fact is what can be found in the Universe. We cannot know all the facts. A supposed fact acquires the status of a fact when it is checked up. If you say: "This house is made of brick," the supposed fact can be checked by examining the house.

Notice once again that this depends on our accepting or knowing other facts. We must be able to recognise a brick. We can pick up a brick and say: "This is a brick." That is a fact also. When facts are checked, we bring out their dependence on other facts.

Exercises

Here are some supposed facts. Mention other facts you would have to assume in checking them.

1. This is an apple tree.
2. A train is usually a system of carriages drawn along steel rails by an engine whose power depends only on steam and coal.
3. The well-being of any community depends on the productive, mental, and organisational capacity of its members.

Facts—Certain and Uncertain

Facts are discovered by human beings. One aspect of science is fact-finding, but science could not fully be defined in terms of this only; it is much more. Supposed facts shade off in their degree of certainty. For example, it is a fact that the sun is a star, that it is hot, that it is composed of gases at a very high temperature; but as soon as we try to state what these gases are, how heavy they are, what the centre of the sun is like, etc., etc., we are dealing with matters that are more and more difficult to check in detail. We begin to talk of the "weight of evidence" for this or for that, or of probabilities. Facts begin to be linked together with theories which themselves gradually acquire the status of facts. They acquire this status, as usual, when they are checked over and over again by practice, by experiments.

Exercises

State the following supposed facts in the order in which you consider they are most securely established by the evidence.

1. This is a piece of paper.
2. Trade Unions have different functions the U.S.S.R. from those in this country.
3. No country could be self-supporting.
4. Mars is inhabited by living beings.
5. In the animal world the eyes are essential for survival.

Some Facts Are Made By Human Beings

Human beings are active animals; they change old facts into new ones. You read this book. You have made the reading of this book a fact about yourself, and about the book. You turn a spindle on a lathe. There are new facts about that metal rod which *you* brought into being. I am typing this on a machine. It is a fact that this is a typewriting machine. A large number of workers have contributed to this fact, converted the raw material buried beneath the soil in different parts of the world into the metal, the paint, the fabric of the cover, the ribbon, the ink, etc., etc. Facts can be stated about each of these parts that could not be stated about the raw material; and the craftsmanship of the various workers is responsible for the creation of each of these facts. This is true also about the people who assembled the parts into the complete machine. It is a fact that the machine represents the summation of human labour and that it illustrates how inter-dependent all these processes are.

When we say, "The typewriting machine is the result of social effort," we are stating a simple fact that can be checked in detail; but if we ponder over it we can easily see that the simple fact is a very complex and far-reaching one.

Exercises

Mention facts made by men. under each of the following headings:

1. Inventions, food, cothing, shelter, transport, communications.
2. Increasing the power of the eyes, the ears, and of the human body as a whole.

History is simply the story of how certain facts have been brought into being in the past. We who make facts, therefore, also make history, but as we shall see, some facts when made are more important in the course of history than others. That is one of the things we shall have to examine.

Exercise

1. Mention the names of individuals associated with the making of the following facts of history:
   The Russian Revolution; the French Revolution; the English Revolution; the Munich Agreement; the Nazi Party; the Bolshevik Party; the Civil Disobedience Movement.
2. Mention the names of organised groups or parties associated with the making of the same facts:
   (a) by working for them. (b) by opposing them.

True and False Statements

A statement may describe a fact. It is a true statement when we can check it up, as already explained.

"I am reading a book" is a true statement, for instance, if it is actually read from a book.

"Every house in Britain is supplied with electric light" is a false statement, because its falsehood can be checked up.

Are all statements either true *or* false?

The answer would evidently appear to be *yes.*

Can a statement be both true *and* false?

The suggestion sounds absurd. Here is a statement:

"The more light I have, the better I can see."

This is evidently true. Always? In all circumstances? Apply the usual test; i.e., *try it out in practice.*

As the light increases, so visibility is improved, but presently the light becomes too brilliant; one begins to blink, and finally one is dazzled with the excess of light. From then onwards: "The more light I have, the worse I can see."

So the original statement as it stands is both true and false. It depends on the circumstances. Exactly. We must not divorce the statement from the situation in whichh it has meaning. We have always to ask—in what circumstances is it true, and in what false?

But can a statement be both true and false in the *same* circumstances? Remember what we have said about definitions. We always describe only a partial aspect of the whole situation in any definition, and that in itself falsifies the situation, because every actual situation always has in it more than is stated in words. Here for example is a statement:

"The Chamberlain policy sought to strengthen the British Empire." But if we look at the steps he took to strengthen that Empire we can see that he had also to strengthen those rival forces of Empire, *viz.*, Fascism and Nazism, that were

directed towards disrupting the British Empire. Hence it is equally true to say: "The Chamberlain policy sought to weaken the British Empire." Subsequent history has borne this out.

Hence, if we wish to be more exact in any statement we have to ask: "For which aspect of the situation is the statement true, and for which aspect false?" Since the situation itself may embrace *both* aspects, the original statement may be *both true and false for that situation.*

The point we have to stress is that no statement must be divorced from its context. The meaning of a phrase, of a word, is intimately wrapped up in the environment of the phrase or the word. In a sense we have to look inside the statement and outside the statement, and the two views obtained have to be considered together. We repeat: we first seek the circumstances in which it is true. Secondly, we seek the circumstances in which it is false. Both such circumstances may co-exist. When they co-exist in the same situation the statement is both true *and* false for that situation.

Exercise

In what circumstances are the following statements true?
In what circumstances are they false?
In what situations if any, are they simultaneously true and false?

1. A guerilla warrior fights alone.
2. Music has a soothing effect.
3. Discussion clarifies thought.
4. The unemployed are unemployable.
5. To steal is illegal.
6. All men are equal in the eyes of the law.
7. The more I read, the more I learn.
8. To err is human.
9. A hammer is used for driving nails into wood.
10. A box becomes stronger by nailing up the joints.
11. The more you train, the better soldier you become.
12. One added to one is two. (Examine this by considering adding groups of people).

What is An Internal Contradiction?

In certain of these illustrations the statements have been both true and false at the same moment with regard to the same subject, that dealing with the Chamberlain policy for example. Now to say that a statement involves a verbal contradiction, because it is both true and false, and to say

that this truth and this falsehood are checked in the actual process described by the statement, is to say that there are two contradictory tendencies at work in that process.

In dialectics when we say that there is an *internal contradiction*, we mean that two conflicting tendencies are developing as the process itself develops. They are not separate of course, but interlocked. In the given situation they imply each other. Capitalism, for example, gives rise to two such contradictory tendencies. Resting as it does on the use of labour power for profit, it must have workers with an ever higher degree of technical and scientific skill, and of educational understanding. But this has meant that workers have become politically active and have sought to organise themselves against this use of their labour power. Here are two conflicting tendencies at work in the same process. When we talk of the class struggle we are referring to this actual conflict in this society. The two contradictory elements are clearly not separate and independent. In the social setting the one implies the other.

We can see it exemplified in British foreign policy during the past ten years. On the one hand there was the urge for unity of capitalist powers against the growing international Socialist movement; and on the other hand there was the disunity among the capitalist powers on account of the rivalries among themselves. These represent two objective conflicting tendencies—a real contradiction—within the social and economic framework of Europe, inescapable as long as its economic structure remained unchanged.

In the face of this contradiction it is obvious that any policy pursued by Britain within such framework must swing to one or other of two poles. The Chamberlain policy represented an attempt to unify the imperialist rivals in the face of the so-called red menace—as in Spain and at Munich—and in so doing enabled the fascist and nazi powers to build themselves up and become strengthened. Hence they were the better armed to wage a struggle against Britain and France for the possession of their Empires. The policy of Churchill therefore had to face the imperialist threat in a new and more intense form. Swinging therefore to the opposite pole, the Churchill Government boldly accepted united action with Socialist Russia. Whichever way the policy is turned within the present economic structure of Europe, the contradiction

cannot be evaded. To seek to strengthen capitalism by supporting nazism and fascism is to weaken capitalism. To seek to strengthen capitalism by opposing rival imperialisms with the help of the Socialist Russia is to weaken capitalism by weakening these imperialisms.

Illustrations of contradictions in situations are a commonplace. The important point is to become aware of them. It is a common experience for instance to find that the more you realise you are learning about a subject the more do you realise your ignorance of it. The process of learning arouses a sense of knowing and not knowing. Again there are certain drugs such that the more one loves them, the more does one hate them. In a community, the more that individuals insist on practising an unrestricted freedom, the more do they get in each other's way, and place restraints on each other's freedom.

If we turn back to our discussion of the co-existence of truth and falsehood in relation to statements we will see that we were really describing situations showing internal contradictions of the type we have just pointed out.

Exercise

Discuss the following assertions by examining for internal contradictions:

1. India can be consolidated against Japanese aggression by suppressing the demand for independence.
2. The success of Hitler rested on the fact that no world Empire as large and as scattered as the British can be defended simultaneously at all points.
3. Under capitalism the lower the wages the greater the profits.
4. Capitalism in its drive for world markets must finally dominate the whole world.
5. Competition forces unification into Trusts and Combines.
6. Every organisation finally becomes too big for its boots.
7. The child is the teacher of the man.
8. The longer I live, the more I die.
9. Appetite comes in eating.
10. Capitalism contains the seeds of its own destruction.
11. Theory without practice is dogma.
12. Practice makes perfect.
13. Men, limited intellectually and physically, have an unlimited capacity for discovery and greater knowledge.

Formal Logic versus Dialectical Logic

What we have just discussed brings out a fundamental difference between dialectical and formal logic.

We have seen that a statement and its opposite, or its negative, may both be true about a given situation; and this, as we have seen, is connected with the fact that in nature there are no pure, simple situations capable of being defined completely in a phrase. Nor are there situations isolated from everything else. We can go on discovering more and more about any situation. We have to begin with the world as it is found and try to discover how to handle it. Formal logic begins from the opposite end. It tries to deal with ideas that can be put into the form of simple definitions; it tries to define its universe in a few phrases. So it is really concerned with a universe of a few ideas. Thus it is not surprising that one of the fundamental assumptions made at the beginning is that a statement cannot assert both A and not A at the same time. For example, in mathematics we would never say that a point is also not a point. It is correct to say that, in the world of ideas constructed by the logicians in their own mind, such a statement is valid. But it is rather to be seen as telling us something about the limitations of their logic; it certainly tells us that their logic will fail to deal with such situations as we have been concerned with in real life, where a statement may be both true and false, both A and not A at the same moment. A point in the physical world may be regarded also as a very short line or as a very small area. It is not difficult to see now where the vital difference between the two logics lies. In formal logic the definitions and their relations are all one has to discuss. There is no other environment, no other context. They become disembodied and isolated ideas. The absence of the environment shuts off the possibility of the statements being seen in relation to a context against which they can stand in contradiction. It follows that the logic of such problems as can be discussed in such artificial terms has to be verbally non-contradictory. Hence they say that the test of truth is that statements made about it shall be consistent *i.e.*, shall not contradict each other. This is an abstract mental test or at best a verbal test for truth. The test we have everywhere emphasised is that a statement is proved to be true or false in practice. Truth here rests on the nature of the physical world and not on any abstract notion invented by the mind.

Deduction and Induction

It will be clear that a logical subject (like mathematics)

develops by *deduction* from certain assumed definitions and axioms. Logical conclusions are drawn from premises that seem not to contradict each other. This applies both to so-called pure, and to applied mathematics in which the conclusions are drawn from assumptions that refer to actual physical objects and processes. In this sense any distinction between pure and applied mathematics is fictitious. On the other hand experimental science develops mainly by *induction*, that is, conclusions of a general nature are suggested by particular experiments. Thereafter applied mathematics comes into play by making these generalisations into assumptions. Special deductions are then drawn logically and their truth checked up experimentally. Science therefore, being both a theoretical and an experimental subject uses both deduction and induction in a sort of interplay.

Are Contradictions Inevitable Even in Formal Logic?

It will be seen that a proof in formal logic demands at least that a conclusion drawn shall not contradict or deny the very assumptions on which it is erected. The trouble about all this is that human beings are not merely thinking machines. When they think they use their imagination, trying to imagine and cope with possble cases that might contradict their conclusions at each step. Imagination, whatever else it may depend on, also requires human experience, and so it is not unexepected to a dialectical materialist who sees this inter-connection between rational thought and social living, that logical proofs have been accepted in their time and later overthrown. In mathematics, certainly there is a whole history of the struggle for logical rigour. At last a peculiar situation has arisen, sensational for the formal logician but amusing to the dialectical materialist. Godel has proved that starting with any system of assumptions of an apparently non-contradictory nature, it is not possible to prove that a contradiction will not finally arise. Thus a blow has been struck at the certainty of any formal logical conclusion based on any system of *isolated* ideas. One is entitled in these circumstances to ask—What is a proof?—and in particular—What is the validity of Godel's proof? A spanner has definitely been thrown into the machinery of mathematical logic, and the death knell of pure deduction alone has been sounded. In dialectical logic this is obvious from the beginning, since the human mind, unlike the as-

sumptions and axioms, cannot be artificially isolated from the physical world, and work in a physical vacum.

Can a Statement be Neither True Nor False?

"Cabbages are more beautiful than cucumbers."

How do we check up the truth or falsehood of this statement? There is nothing to check. I simply assert it and you deny it. I am judging or valuing cabbages relative to cucumbers differently from you. The ordinary test we had in mind does not apply.

Here are a few such statements:

It is not fair to press for increased wages when your firm is doing badly.

It is mean not to join your trade union.

People who earned less than £6 per week should be sterilised.

People who live only on dividends should be sterilised.

Blacks are a lower type than whites. They have lower moral standards

Workers are a lower type than members of the upper class. They have lower moral standards.

An atheist is a bad man.

The weakest ought to go to the wall.

Beethoven was a greater musician than Bach.

Marx was the greatest man who ever lived.

So was Lenin.

To-day is the most critical period in human history.

All these are judgments or valuations of situations, of people and of things. They are statements of the importance of something to the individual who makes the statement, or they are judgments of the importance of something in a given situation. As they stand we cannot say they are either true or false, although the judgment may mean very much to the to the individual who makes it, or even to quite a large group or class of people.

Again, for us, every significant aspect of such judgments is seen against the context or the environment in which they are made. We have to enquire who is the individual who makes such judgments? With what other class of person are his judgments identical? How does he come to have such valuations of what is and what is not important? What will

happen if people should act on the basis of such judgments? If there is a conflict of values and these are reflected in action, what is the nature of the conflict in action that will arise?

To a consideration of such questions we shall return later.

Exercise

Take a series of topics of interest to:

(a) The working class. (b) The middle class. (c) The capitalist class. Indicate the various judgments or valuations that might be made by members of each of these classes, in each case in a single sentence. Take for example the attitude of each class to wages, to salaries, and to dividends; to a visit to Blackpool or Southend; to clothes; to education; to science; to working in a mine; to the small tradesman; to Trade Unionism; to chalking slogans on walls.

Can Judgments Shade off Into Facts?

Just as the sense of certainty about facts may shade off because of the lack of confirmation of a direct nature, so judgments may become so generally accepted that people act on them and live by them. In that case they come very near to having the standing of facts. If I say for example:

"It is cruel to torture a child,"

the statement will call forth universal agreement. Anyone who holds the opposite, and acts on it, we regard as morally deranged, just as anyone who denied that this house was made of brick or wood or stone, we would regard as mentally deranged.

Some judgments therefore are like facts in the sense that they are taken into account in settling conduct. What we have to notice however is that such judgments have not always been so generally accepted. They have grown up historically, and if we are to see their analogy with facts we must see them as values that have been made by men in their social life. Thus, when the social situation changes, we must expect that these judgments also undergo change. For example, to-day people who assert that it is cruel to torture a child will also assert that it is right to bomb a military objective situated in a town even if in so doing a child is so wounded as to live in torture all the rest of its life.

It appears therefore that some judgments if they are to be regarded as statements of truth, must also be regarded as statements of falsehood.

Exercise

Discuss the following judgments by examining how widely they are accepted, and then indicating circumstances in recent history in which social practice has contradicted them:

1. No person should be allowed to die of starvation.
2. Everyone willing to work should be provided with a job.
3. It is wrong to take what isn't yours.
4. It is vile to rob the poor.
5. No member of a society or of a nation ought to take advantage of the nation in its extremity.
6. In a democracy all men are equal.
7. Human life is sacred.
8. Men who have fought for their country deserve to be treated as heroes.
9. Baldwin was an honest country gentleman.
10. Chamberlain was an honest man who had the City of London engraved on his heart.
11. The German-Soviet non-aggression pact of 1939 showed that the Bolsheviks were double-dealers; the Anglo-Soviet pact of 1941 showed that they were heroes and gentlemen.
12. Hitler brought a national pride to Germany that we would do well to imitate.
13. The Jews hate agricultural work.
14. The British have a natural aptitude for Colonial administration. They know how to win the confidence of the natives.

Some Facts We Have To Accept

1. Human beings live, think, feel, act, sleep, scheme and plan, in a world of material objects, of animals that also live, and of vegetation that represents a level of living matter.

2. All known forms of life can maintain their living form only within a narrow range of temperature and pressure, and in an atmosphere in which oxygen is present.

3. There was a period in the history of the universe when the Earth was a part of the Sun at such a temperature that no form of living matter could possibly exist on it.

4. It follows that living matter was a later development in the history of the Earth, manifesting itself when the special combination of circumstances presented a favourable environment for its persistence if it occurred, and actually occurring at that point. We must see the occurrence of living matter as in a sense something of the nature of an accident, that particular variation in the form of matter actually occuring at the time and in the region where it could continue to persist.

5. Evolutionary Theory based on a mass of evidence can show the successive stages through which this most primitive form of living matter passed, until the present stage is reached where it contains among its forms thinking, acting, feeling man.

We shall come to understand later why there is nothing peculiar in this line of development.

NOTE.—Those whose outlook and activity rest on this scientifically established body of facts are *materialists* (sometimes called *realists*). *Dialectical Materialists* are those materialists who recognise that all change is dialectical in nature as explained in this book.

What Is Life?

Warning. Some people find it exceedingly difficult to accept the view that living matter is the mode of existence of a certain form of matter, and that thinking and feeling are simply the special qualities of that form of living matter. They feel that thinking and feeling are so peculiar and so unique in nature that they cannot be regarded simply from this angle, but must have been specially created. It is the uniqueness and peculiarity of it that holds them.

All this arises from a lack of imagination, because if they will look at anything at all they will see *it* is unique and peculiar. There are no two things in the world that are alike in all respects. They may have a similar shape and colour, but even in these, the details of shape and colour will be found to differ. If it were not for the fact that they show differences, we would be unable to distinguish them. Vegetation is green—in that sense it is unique, but no one feels that there is something peculiar about that. When, however, it is something so close to us as our thinking and feeling—that, they feel, must be special and peculiar. It is also not far removed from the feeling of the child that no one else can really feel and think as it does. It is unique. That is overcome after a little experience when one appreciates that most of one's thoughts and feelings have been thought and felt by others, and that they are not very original.

So everything is unique in one sense, but for that very reason uniqueness is the most common of all characteristics. The fact that one form of matter is living is no more extraordinary than that another form of matter is non-living. The

fact that one form of living matter can think and feel simply tells us something about the precise nature of the changes through which matter can pass in appropriate circumstances. If the circumstances had been different it would have been a different universe, and other equally peculiar forms of matter would have developed. We would not have been here to see them, to think about them, and to have feelings about them.

CHAPTER FOUR

QUALITIES AND QUANTITIES

Qualities

Matter shows itself in many and varied forms. Each form presents a special quality or a group of qualities. A lump of lead for instance shows solidity, hardness or softness, compactness, flexibility, shape; a piece of glass may show brittleness, colour; a flower gives off an odour; a piece of sugar tastes sweet, vinegar sour, and so on. Each of the forms of matter—solid, liquid, gas, electrical energy—has its own special group of qualities. A quality is experienced by us when we come into the environment of such forms of matter.

Certain qualities are much more bound up with ourselves than others, particularly, as one must expect, those qualities that arouse strong feelings in us. For example, when we say "This tune is beautiful" we are referring to a quality of pleasure evoked in us. We blame it on the tune. The same thing occurs when we talk about a compelling speech. The quality is actual; it expresses itself in the relation of the tune or the speech to ourselves.

There are qualities of qualities, or levels of quality. For example, thinking and feeling are qualities of human beings. We talk further about qualities of thinking as shown in the words—clear, abstract, cogent, confused, practical, obscure..... In the same way there are qualities of feeling as when we say he loves or hates, he is angry, he shows pleasure, he is indifferent, he is tensed up. . . . All these feelings corres-

pond to different moods. They are qualities of the quality of feeling.

Qualities are not restricted to single objects or individuals, and their relation to objects. There are distinctive qualities about a situation. There is a quality or "atmosphere" about a meeting of Quakers that is quite distinctive and could not be confused with that of a masonic lodge or of a glee party. There are distinctive features of the present war situation in Britain that must be regarded as qualities. The state of feeling at the time of the Battle of Britain, at the return of Chamberlain from Munich, at the time of the attack by the nazis on the U.S.S.R., all these will be remembered by those who experienced them as qualities of this whole period. The way of life of working people during the last twenty-five years, with its depressions and intense unemployment, its means tests and its hunger marches, its queues at the Labour Exchange, etc., etc., all these represent for us a way of life that will always be associated with that quarter of a century. There was an atmosphere during the two centuries of the industrial revolution in Britain that marked it out sharply from that of the feudal period. Things were happening then that could not have happened before A new field of human experience, a changing surge of human emotion, of thoughts, of interests, of activities was opened out.

Wherever a distinctive quality shows itself, there is a "thing," an epoch, a stage of human society, that can be examined just as surely and just as sharply as one can examine a table, a house, a tune, or a public speech.

Quantities

Scientists try to discover ways of measuring qualities. They tell us how to measure the hardness of a piece of steel, how easily it is bent or how elastic it is. They express the quantity of noise there may be in a factory or in a train or in an aeroplane by means of units of noise. They set up instruments for making a *standard noise*, just as we have a *standard yard*, by means of which we can measure the quality of extensiveness. They make a lamp with the brightness of a candle (1 candle-power) to act as the unit for measuring the brightness of other lamps. When it is said that science is concerned with measurement, this is what is meant. They seek to measure the *quantities* of qualities.

Some qualities are much more difficult to measure than others. Again these are the qualities more closely associated with our own feelings and our thoughts. If I say A is much angrier than B, I am remarking on the quality of anger present, but I am also pointing out that one is more intense than the other. It is not easy to lay down a unit or standard of anger! Nevertheless, there is clearly something corresponding to greater or less, which is the first step in establishing measures. The same difficulty arises when we say, "This tune is more beautiful than that," or "This poem is deeper, or more subtle, or is more picturesque than that." So we notice that the difficulty of finding a basis for measurement, or for obtaining the quantity of a quality, becomes greater as we pass to the consideration of qualities associated with judgments of situations rather than facts about situations. Nevertheless, it is a fact that even in such cases, if there were no intensity or quantity present, the quality itself would also be absent. Thus we can still legitimately talk about the quantity of such qualities although we may not be able to say precisely how much.

Summing up then we can say:

Situations show themselves in certain qualitative forms.

Each of these shows other derived or subsidiary qualities.

Qualities vary in intensity, or are always associated with quantities or amounts.

Exercise

Mention some of the qualities that the following all possess, and others which only some possess that make them distinctive:

(i) Orange, Penny, Egg, Football.

(ii) Chirp of a grasshopper, song of a bird, bark of a dog, cry of child, speech of a human being.

(iii) A friendship, a family, a business partnership, a Trade Union, a political movement, an army.

(iv) A single note on the piano, several notes together, a series of notes in succession.

(v) A word, a slogan, a speech.

Some Facts About Qualities in Thinking

We are later going to study how people think, judge and value. There are one or two facts about this that we must bear in mind at this stage. Thinking and feeling are not confined to human beings. We have seen animals enraged.

We have seen dogs estimating or judging where a stone will fall, and monkeys have been shown capable of of working out quite complicated ideas in making a plan for a particular purpose. There is plenty of evidence to show that there is a gradation in thought capacity as one proceeds downwards from man through the evolutionary scale. Without brain there is no thought.

Two qualities show themselves particularly in animals that are capable of some degree of thought.

(a) Learning from experience or practice.
(b) Anticipating the future.

These are not separate. Thinking animals learn from experience to anticipate the future. The next stage is reached when thinking is so linked with action as not simply to anticipate the future, but also to plan it, that is, to make it.

Natural thinking therefore is that which proceeds step by step with the actual physical happening in nature itself. What one *thinks* is happening is in fact happening and is capable of being verified at each step by checking up. The thinking is then correct, or accurate, or true. We might call this physical thinking, because it is a counterpart of the physical process. If a person is asked how much he will charge to carry through a certain job, he thinks in detail of how long he will be working, how much effort he will have to put into it during that time, and how much skill he will have to use. His thinking is true when he has pictured the whole detailed process in this way. If the job is a dangerous one, other factors come in. He has to anticipate the accidental or the unexpected. The effort to anticipate the unexpected brings into play a certain imaginative quality in thinking.

While imaginative thinking is composed in detail of reflections of physical situations in past experience, the sum total of these may not correspond to a possible physical situation. For example, pictures of angels show figures each portion of which—wings, legs, head, etc., can be seen among living creatures; but who has ever seen an angel?

So sometimes our thinking may go wrong. We may build up a false picture of what we suppose the world is, or is going to be like. This is often what we mean when we say that a person is a victim of his imagination. But it

is also the case with an individual who makes a false estimate of the present and the future, and so plans badly or falsely.

Imaginative Thinking and Feeling

We must not suppose that all forms of imaginative thinking are called into being when we try to anticipate the future. Imaginative thinking and feeling may be used creatively to make something quite real that did not exist before. We do this, of course, when we go a stage beyond anticipating the future, by using our understanding and our experience that has enabled us to anticipate what will happen, to make something happen that would not otherwise have taken place. In that case we use our imagination to consider or picture how our own actions, united with the rest of nature's happenings, can change the future from what it would otherwise have been into something we desire should happen. We are putting ourselves into the picture not simply as an inert non-living unconsious object, but as a thinking and acting object that understands. We see ourselves as something creative—as a force that can bring a new quality into the situation. We become planners of the future. That stage of the process is completed when the plan is put into action. *Without clinching the matter in action, we remain simply day-dreamers.*

Imaginative thinking and feeling show themselves again in mathematical work, and again in artistic expression. The mathematician abstracts from his experience of real things, the ideas of points, circles and lines, setting out in words their relations to each other, and by bringing groups of these together in imagination (helped sometimes by diagrams), draws other conclusions about the relations between them that are not at first sight obvious. Although there may be no groups of objects in the universe actually showing the kinds of relations he has assumed, this does not by any means prevent him from carrying further with this imaginative work. Since, however, the original abstractions—points, lines, circles, etc.—are in fact abstractions from real situations, a great deal of what he concludes from his analysis may have an application to real situations. This is particularly to be expected since mathematicians are human beings also, and therefore their thinking habits have been built up in a real physical world in accordance with natural

physical processes. When the mathematician deliberately tries to make his abstractions fit as close to the real thing as possible, we say he is an applied mathematician. Otherwise we call him a pure mathematician. Naturally it is frequently impossible to draw such a distinction. *(Cf. Chap. 3.)*

A mathematician who sets out to prove something, feels, when the proof is obtained, a certain logical necessity of inevitability, and of satisfaction. It is exactly the feeling everyone else has when an argument has been clinched. So we see that the abstract logic of the mathematician is linked up also with his feelings. Thought and feeling are interwoven, at every stage of the logical process. It is quite possible to become as excited over the proof of a piece of mathematics as over a piece of political analysis. It is less frequent, that is all. Only a machine could act otherwise; but a calculating machine, for example, is not considered to have any qualities of thought.

At the opposite end of the scale in imaginative thinking and feeling is artistic work. Here it is the emotional quality that comes to the fore. The artist is "inspired" to pass on something he feels very strongly, and for that purpose pieces together past experiences and past emotions in such a way as to produce in combination the new feeling he wants to create and to pass on. He does it, of course, through a certain machinery, by means of physical materials—it may be paint and brush, chisel and stone, pen, ink, or musical sound and so on. The technique has to be learnt, as it has also in mathematics, but the primary object of the use of the technique is to arouse in the hearer or onlooker something which the artist feels intensely. There will, of course, be an intellectual side to it. It will have meaning in the sense that it stimulates thought also, but first and foremost it has an emotional quality. The difference between an artistic work of a creative nature and a scientific or mathematical work is that in the former we always ask, "Do you like it?" and in the latter, "Do you understand it?" In both cases, both questions can be asked and can have meaning, but the order of asking is not the same.

If we are studying the technique of a piece of music we might ask, "Do you understand it?" If we are appraising or judging it we ask, "Do you like it?" In the one case it is to the mind that the appeal is first made and in the second case

to the feelings. In artistic work, this appeal to the feelings is, of course, effected by the artist not simply through his doing something that he feels ought to be done or that he likes to do, but also by his making a direct analysis of an intellectual nature. A painter may feel a certain mood or atmosphere in his subject, and may *know* that that can be communicated to the onlooker by the exaggerated painting of certain features in his subject, or by a free use of a certain colour. That is part of the technique of the artist, but that technique would not be applied at all unless the artist is also himself emotionally sensitive. We see then that the artist makes an analysis of his subject matter both of an intellectual and an emotional nature.

Social Background of Thinking and Feeling

Already we have seen how important it is to appreciate the context or the environment in which an object exists and changes, or in which any statement is made. Here again the relation between thinking and feeling on the one hand, and the environment in which they take place on the other, has to be clearly borne in mind.

Workers in a factory spending a large part of their day among whirring machinery and the slapping of belts, working at lathe, planing machine or drill; miners working by the dim light of their lamps underground, filling up the trucks or trudging their way along the galleries — all these have their own collection of thoughts, their own conversation, their own language. This stands out clearly if we compare it with the speech and with the content of ideas of agricultural workers, accustomed to country life, far removed from the town. Who has not heard the expressions "country yokel," and "townie," that bring out the great cleavage in outlook that exists in most countries between those who pass their lives amidst the miles of streets and those who trudge across the fields and hills. The ideas, the assumptions, the judgments, the valuations, the very vocabulary of the one are very different from those of the other, similar as these workers otherwise are in many respects. The social tasks they undertake and their way of life condition the content of their thoughts, and how they feel about matters of common interest.

Even greater indeed is the contrast of Mayfair with Brixton, or of the West End with the East End. Social and economic class, a drastic line of cleavage across the community, creates also a corresponding split in thought and feeling. To realise this, one requires only to compare the conversation in a West End club with that in an East End pub.

But the contrast is greater still if we compare these outlooks to-day with those of a generation ago before the coming of wireless, before the general introduction of the telephone, motor-car, bus, motor-cycle, cinema, etc. In a single generation our interests have been revolutionised, the subjects we can talk about, can judge, value and have opinions about, were hardly dreamt of by our parents. It is in this way that our thinking and feeling are knit up intimately with the social background in which we are brought up. Their content has been transformed.

If we will ponder over this we can quickly appreciate that it must have a very definite meaning in relation to the quality of our thinking and our feeling. In the first place, we think with the mind of the society and of the period in which we live. Our thoughts and feelings are not so individual and unique as we might imagine. They are shared by many thousands of others. And if any one of us is struggling to resolve some problem, it would be indeed strange if many other were not also thinking and struggling in the same way with the same difficulties. In the second place we think in terms of the images and pictures that have fallen within our experience, and so our thoughts, feelings, judgments and estimates are interpenetrated with ideas and assumptions drawn from that section of society in which we live and spend most of our waking and working hours. We reflect our social level not only in the mannerisms of our speech, but in the mannerisms of our thoughts and feelings. Writers, artists, musicians, painters and scientists, however individual and personal their creations may be, are nevertheless expressing through their work, features of the world about them, of a social nature. They may be unaware of it—indeed they are usually unaware of it—but they cannot escape it.

The social problems of any period agitate the minds and arouse the feelings of the people of that period. Its workers and its scientists cope with its productive and theoretical side.

its statesmen with the political side, its musicians, its poets, its actors and its artists with the aesthetic side. Men are everywhere consciously or unconsciously engaged in a struggle with the complications of their society, and that struggle expresses its mood, its atmosphere, its feelings, and its intellectual quality. It is against this background, therefore, that we have to see such aspects of human mental, emotional, and creative activity as science, literature, music, art, and drama.

The same must be true of what we call mental aberration, which after all is a very special form of thinking, feeling, and acting. A person with whom no one agrees, even approximately, on some matter is usually regarded as 'queer' if not actually deranged. Whatever the legal side of the matter, the first test for sanity is social agreement. But this is the negative side. Positively, society demands that individuals behave in a certain way. During the period of expansion of the 19th century, society expected men to express their individuality by success in business, by personal advancement, by becoming "self-made" men. People thought and behaved in that way and their ethical judgments on what was right and wrong centred around this outlook. The outlook of the period expressed itself through the individuals. The situation changes. A period of contraction sets in; businesses go under, unemployment is rife, openings for young ambitious men and women become fewer. The old individualist outlook still persists, but the possibilities of expressing it in action become restricted. So it has been during the past generation. Individuals feel frustrated. It is not easy for them to see society as a whole, and to see that it is this which has changed. Nor is it easy or them to throw off the hopes of personal ambition and set about making a society that will allow human beings free and full expression. Instead there are driven inwards, become morbid, introspective and depressed. Society is driving them insane. It expects something from them but does not provide them with the possibility of giving it. And so the time is ripe for society to throw up its Freuds, its Adlers and Jungs, its psycho-analysts and its psychopathologists. It is ripe for a flight from social realism in science and in art, and for the seeking of solace in abstractions. We have been living through that period.

Here are a series of topics for discussion, for essays, for

lectures and for research, that underline the qualities of certain historical periods.

1. How the social history of any period is reflected in the music of that period.

2. The growth and development of science during the Industrial Revolution.

3. Science before and after the Russian Revolution of 1917.

4. Newton and the problems of his day.

5. The writings of Jeans and Eddington during a period of social frustration.

6. Shakespeare and the merchant class illustrated by his treatment of Shylock.

7. The rise of abstract art between the two wars (1918-1939.)

8. The growth of proletarian literature during the last 20 years.

9. The growth of the left movement during the period of capitalist crisis.

10. The growth of technical education since the Industrial Revolution.

11. Art in the Victorian era.

12. The interest shown in the work of Freud in our individualistic society compared with the comparative indifference shown by people in the U.S.S.R.

CHAPTER FIVE

THOUGHT, FEELING AND ACTION

At this stage we must be warned against the elementary mistake of supposing that thinking even by an individual can be carried through, as a thing by itself. You think about some *thing*, or some *situation*. That arouses feelings in you similar to the feelings that would be aroused in thousands of others. The situation has been affecting you, both in your thinking and in your feeling. You are now different from what you were; you have had an experience. and all this comes in as part of your later actions: you show new qualities. But a human being is active. He does things, and

he thinks and feels about the things he does; he then passes on to affect the things he thinks and feels about. If the situation irritates him he tries to change it so that the irritation may pass, so that the quality of his feelings may change.

We can put it this way:

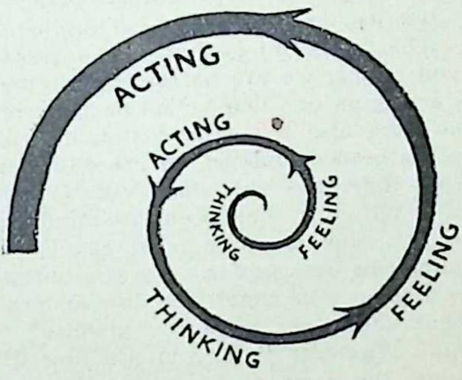
First stage.—The world affects his thoughts, passing into

Second stage.—The world and his thoughts arouse his feelings, passing into

Third stage.—He does something to the world, changing it.

These are not separate and distinct as we have written it. As he changes the situation, he is induced thereby to think and again to feel about what he is doing. And so he passes on to the next stage, which is really the first stage in a more developed form, and so on.

We could illustrate it in this way:



Here is a spiral, ever widening. Every time a complete circuit is made the world is more changed, the thought and feeling is more developed, and the action is deeper or more experienced. Each stage, in detail, builds on what has gone before. Each complete stage builds on each previous complete stage.

It is important to grasp this idea of growth or development from one level to the next because we shall see it recur-

ring in various forms over and over again.

If our thinking is false, we shall discover this by checking up what we have done with what we had expected to emerge out of our thinking and acting. In this way we continually "gear in" our thoughts with the actual way the world behaves. We think more and more materialistically. Frequently our feelings are aroused first and we think about it afterwards.

If we become enraged, we may find that our thinking becomes confused. so closely are our thoughts and our feelings interlocked. For accurate thinking, we have therefore to watch our feelings carefully as part of the whole situation, and if we know that when our feelings run riot our thinking is bad. that fact may make a difference to our feelings.

Changes Produced In Ourselves

If we will look again at this picture we will notice two things we are usually inclined to forget. They are obvious when stated, but we do not always behave as if we appreciated them. The first point is that in this process of thinking, feeling and acting, we are ourselves profoundly affected. The world is acting on us. Our action on the world is at one and the same time also a counter-action on ourselves, and when a stage has been completed we are different from what we were. That difference will stand out if we deliberately ask ourselves what effect has been produced on us. For example, you can now examine what effect has been produced by reading this book so far. Are you enraged? Do you feel you have wasted your time? Or do you feel enlightened, and if so, what new point have you grasped? That is a change in you. Whatever it is, you are now different, and you cannot *undo* the harm or the good. You can only add something else to it. And this sort of thing has been happening to you all your life. An illustration from recent history will bring this out.

The tremendous resistance of the U.S.S.R. to the Nazi attack took most people in this country by surprise. People began to evince a new interest in the U.S.S.R. Only a small fraction, however, asked themselves how it had all happened, and why they had had a false impression of the country and the people. Very few in saying, "I have changed my attitude," thought to it as a change in themselves. Otherwise they

would immediately re-examine the past history of European politics with this new understanding to re-interpret such events as the drive towards a United Front in Europe, the entry of the U.S.S.R. into the League of Nations, the destruction of the France-Soviet Pact, the Munich Agreement from which the U.S.S.R. was excluded, and finally the German-Soviet Peace pact. But remember that even such a change in attitude is a change from a *false* view, as subsequent history has shown, and therefore one's outlook may still be muddled by the relics of prejudices and antagonisms aroused earlier during the period of the false view.

The other point is that your actions have changed the situation in which you were. It is different in some respects. You will make a profound mistake if after doing something you should imagine that the world is not different to the extent to which you have affected it and *to the extent to which you are affected.* For remember that since you are a part of the world, a change produced in you is also a change produced in the world. If this book has affected you—which it must have done in some way—the world is different to that extent. Moreover, the actual writing of this book has had an effect on the author.

Exercises

1. Discuss in detail the effects that have been produced on yourself by some book you have read, some speech you have heard, some class you have attended, or some special piece of work you have done.

2. What have been the effects of implanting in children the idea that they are naturally sinful, that they should be frightened of darkness by threatening them that they will be left in the dark if they are naughty, and by showing fear of thunder and lightning?

3. Discuss some effect produced in you in your early life by some incident, and examine the effect of now being able to look at that incident and that effect calmly and in an objective way.

NOTE.—You cannot go back on history. Something once done cannot be undone. You can, however, add to it in such a way as to transform its future meaning and effect. So an effect on yourself cannot be eliminated. It can only be transformed by linking it up with something else. This frequently happens when you become aware of something that was troubling you. Bringing it out into the open puts it in a new setting and changes your relation to it and therefore its meaning for you. It may in certain circumstances cease to trouble you.

First Steps in Thinking

One of the first steps in thinking, perhaps the most ele-

mentary kind of thinking, is to recognise something, an object, an idea, a feeling, a group of objects. When we recognise it we say it is the *same* as something we have seen or felt before. When we say, "This is a hammer, a chisel, a bicycle," we are seeing certain similarities or samenesses with other things which already form part of our stock-in-trade of ideas or things or processes we know about. We are then grouping it in our mind or classifying it with some other things with which we say it has some feature in common. Notice that this action on our part is reflected in our speech about it.

For instance, when we say, "A saw cuts dark wood," the words, *saw, cuts, dark, wood*, are all very general terms referring to whole classes of objects or actions. We say, then, that the answer to the question, "What is it?" is always in the first place, "It is a so-and-so" or "it is the same as so-and-so."

The Particular and the General—United and Contrasted

Pause for a moment over this simple idea. Take this book for example. If anyone who has never seen a book wants to know what a book is like you hold it up and say, "It is the same as this." A book in general can be represented by *this* book. The individual then looks at this book and remarks that it is a very peculiar sort of book, especially when one looks at the contents. "Oh yes," you answer, "although it can be taken to represent a book in general, it is also a particular book." In one and the same object there is united *the particular and the general*. In certain respects all books are like this one, but if we imagine all books are *really* like this one we will make a very grave mistake!

We have introduced the word *really* merely to emphasise the fact that the object in question is the same as the other objects with which we have classified it, and *also* different from them.

We have already come across this idea when we pointed out how some people cannot overcome the fact that they are unique. Everybody is unique in some respect. For that reason, as we pointed out, uniqueness is the most common feature in the universe. Notice also that if we say, "This is a typical book"—the statement as it stands is both true and false.

Exercises

Illustrate this unity of opposite features by considering:

1. A typical worker and the special characteristics he may show.
2. Why some hammers and some chisels are better than others (and consequently different from them).
3. Why a girl may prefer to marry a certain man rather than any one of a number of others, in spite of the fact that they are all men, all members of her own class, all in regular employment, all well built, and all keen to marry her.

Uniformity and Diversity—United and Contrasted

Let us underline what we have said by looking at a number of further *particular* illustrations of a *general* nature.

When things are classified together we succeed in doing this, or in seeing them as a class, because they are the same in a certain respect, but at the same time they are different in other respects.

All workers are the same in the sense that they all have to sell their labour power in order to live. In other respects they may differ, as for example in wages, in skill, in brain power, in temperament, in political understanding, etc., etc.

They are *uniform* in one respect and *diverse* in another.

All countries outside the U.S.S.R. are the same in the sense that within each capitalism operates. But all countries are not at the same stage of development of capitalism. There is an unevenness. There is *uniformity side by side with diversity.*

The fact that these two opposite characteristics are present together may become very important. For example, the differences in behaviour of various countries in a given general situation arising from this diversity may become very important—as to-day in relation to the present war. (c.f., Germany and Britain, both capitalist countries).

Again, the effort to get all workers to act together unitedly in relation to war production, for example, must take into account not simply the fact that they are all treated as workers, but also that, as workers, they are not all uniform in outlook, in social position, in traditions.

Exercises

1. In each case, mention circumstances in which the uniformity of groups of people would become important in action, and those in

which diversity would become important.

(i) In working for a United Front against Fascism.
(ii) In pressing for social security.
(iii) In explaining the meaning of workers' control in the USSR.
(iv) In pressing for production committees among manual workers and administratives staffs.

2. The following words each represents a class of object. Indicate how the uses to which they are put may bring out the differences or diversities of the objects that fall within each class:
Table, chair, lamp, field, factory, knife, machine, building, aeroplane, gun.

Case of a Scientific Law—Uniformity Within Diversity

A scientific law is a statement of a regular or uniform happening in nature. Any heavy object, for example, if allowed to fall from any moderate height falls with increasing speed. No matter how heavy it is, it falls so that every second the speed increases by 32 ft. per second. Here then is a regularity in nature—it is something that always happens. Now notice that the importance of this and its startling character lies in the fact that it is true no matter how heavy the body is, no matter what its colour, no matter what it is made of, on what day of the week it is dropped. In all these diverse situations the outcome is always the same.

Again, suppose we have a volume of gas in a cylinder, and by means of a piston rod compress it. It is then found that double the pressure halves the volume, three times the pressure reduces the volume to one-third, four times the pressure reduces the volume to one-quarter and so on. And all this happens with regularity no matter how different the gases are, whether they be a petrol mixture, ordinary coal gas, oxygen, hydrogen and so on.

A scientific law is a statement of a uniformity in natural behaviour in a series of diverse circumstances.

But notice again it is not in *any* series of diverse conditions that a law is true, or such a regularity shows itself. For example, if an object near the moon were allowed to fall it would not drop to the earth at all, but on to the moon. Nor would its speed increase every second by 32 ft. per second. The law has an unlimited application in detail within a limited scope.

Exercise

State any scientific laws you know, e.g., the law of gravitation, or laws relating to electric currents in wires, or the stretching of elastic bodies under tension, showing the regularity or sameness in behaviour by contrasting the diversity or differences in circumstances in which this regularity in be haviour takes place.

Accident and Regularity—United and Contrasted

All forms of insurance depend on the grouping together of accidents so that as a collection they occur with fair regularity. Life Tables for the life insurance tell how many persons per thousand of the population may be expected to die between successive age limits. It does not say who exactly will die. As far as the insurance company is concerned each death is itself an accident, whatever it might be for the victim; the whole taken together shows a regular return of deaths according to expectation.

The insurance company therefore can plan its policy in the light of the *regularity* which they have extracted from *accidents*.

The same is true of a Trade Union, in which members come and go, but it is the collection that is the Trade Union. The individuals are, so to speak, accidents. For certain purposes, strikes, unemployment benefit, it is the totality of members that matter and the fact that some come and go is of no consequence. On the other hand even if the totality remained unchanged but there was a very rapid turnover in members, so that the actual life of individual membership was exceedingly short, this would be very significant in relation to the reliability of the members for, say, strike action. The accidents would begin to show a new kind of regularity.

These two opposites, therefore, *accident* and *regularity*, exist side by side in the one situation, and the importance of the one or the other for action will depend very much on the circumstances of that action.

All forms of satistics really deal with the regularities that large groups of happenings show, each of which in a sense is regarded as an accident. This is very obvious when we talk of the regularity of street or mine accidents. We can see it again in the figures of growth of membership of a political party, the totality being the membership but individuals may come and go, passing into the party and later out again.

From the point of view of a study of growth alone the total membership matters. If, however, we are concerned with an examination of changing form of the membership, or of the stability of party members, we would require to compile a list of the total time each had been in the party. We could then examine whether on the average this was increasing or diminishing. This would bring out the regularity in growth in period of membership in spite of the variations in individual cases. The regularity would become apparent within the diversity.

Exercise

Mention or suggest other forms of statistics that might be expected to show useful regularities.

Heredity and Environment—United and Contrasted Application to the Development of New Forms of Living Beings

A very important case of this occurs in the field of heredity, and brings out the linkage between heredity and environment a much discussed and much misunderstood subject. The question that is usually raised is put in the form, "Which is more important, Heredity or Environment?" The first point to notice is that children are like their parents. There are *samenesses* and there are *differences* between them, and this is true for all forms of living matter in the animal and the vegetable world. Usually the differences are quite small. Sometimes they are very great indeed. A rose bush does not grow runner beans, but a cultivated rose may become a briar. Heredity then is very important.

The second point to notice is that environment may be all powerful. If living organisms can live only within a restricted range of temperature, a drastic change in the climate may wipe them out completely. The absence of adequate food or shelter may be disastrous. The provision of just the appropriate type of food, warmth, and social direction may produce quite unexpected results. Environment then is very important. Under natural conditions, therefore, and by that we mean for the moment, under conditions where human planning has not entered, there may arise in a single generation quite a diverse population, each member of which

is similar to the parent population but may also be simultaneously different in certain marked respects. Again, the offspring are born into environments which, while all more or less similar, may show quite marked variations from place to place. In both factors we may witness the presence of uniformity and diversity.

Now if it should happen that an exaggerated difference occurs in offspring precisely in circumstances where, say, an exaggerated difference occurs in the environment, and if it should be the case that this modified local environment is eminently suitable for the survival and development of the peculiar offspring, we have the circumstances favouring the growth and development of a new type. It is to be expected that mutations or changes between parent and offspring are continually occurring, but it is only on rare occasions that this coincides with the appropriate environment for its survival.

In this case, therefore, we see how diversity may become crucial in an environment, as a means for the growth and dominance of novel forms.

Exercise

Re-state the problem of the origin of living matter from non-living matter in the light of what we have just written.

All this then has an immediate bearing on the question we asked first, viz., "What is it?" In seeking to answer that question we therefore enquire: of what general class is it a particular case? In what sense is it typical and in what sense peculiar? Is it an accident? Is it a regular accident? What diverse features does it show in this regularity? If it belongs to a class of object or occurrence about which you can make a general statement, how limited is the truth of this general statement? It is along lines such as these, by contrasting the opposite features present in any situation, that we bring out the manysided aspects of the subject studied and so move towards a rational answer to the question, "What is it?"

CHAPTER SIX

RECOGNISING CHANGE

In the last chapter we saw that the first step in any analysis is to seek an answer to the question, "What is it?" and this drew us to examine the samenesses and differences between "it" and other objects and situations. Almost unconciously this has led us to the threshold of the problem of change. For now we ask: "How do we recognise a change, once we have recognised the thing itself and the environment in which it is?"

Here is a factory which before the war employed 300 men. To-day it employs 3,000 men, women and girls. It is the same factory, but it is very different. The workshops are extended, new plant has been installed, new grades and quality of workers have been introduced, it is a "Union" factory, there are shop stewards, there is a production committee, there is a canteen. It is the same factory, but how different.

We are no longer comparing an object or a situation with some other object or situation *at the same time* in order to see how they can be classified together, and how they cannot —but we are comparing the same object or situation at *different times, before* and *after* some specified moment. As usual we use some other change as a standard or basis to help us—change in position of the hands of a cock, change in the day of the week, change in the weather, in the season of the year. Any of these may be used to specify for us the point of division between *before* and *after.*

We recognise a change by seeing what is the same and what is different, before and after. We see the difference in content and form, at the two successive times.

Thus, in looking at the question, "What is it?" from the point of view of change, we are immediately faced with the counter question, "What was it?"

Exercise

By pointing out sameness and difference state precisely the nature of the changes that have occurred in:

(i) The attitude of the general public to the U.S.S.R. since 22.6.41.

(ii) The attitude of the British Government to the U.S.S.R. since 22.6.41.
(iii) The attitude of the German Government to the U.S.S.R. from 22.6.41 until its collapse.
(iv) The magnitude of the anti-fascist struggle since pre-war days.
(v) The quality of democratic feeling since Munich.
(vi) The possibility of co-operation between Britain, the U.S.A. and the U.S.S.R. to achieve freedom from war and from want in the future.
(vii) The structure of British industry since the outbreak of the war.
(viii) The position of the small shopkeeper since the outbreak of the war.

Notice that when we say that something is the same between two successive situations we mean that similar qualities are present. When we say that something is different we mean that an old quality is absent and a new quality is present that was not there before. We recognise a change thefore when we see a "transformation of one quality into another."

Exercises

Remark on the process of change indicated by the following stages:

(i) A green apple	(ii) a ripe apple	(iii) a decaying apple.
(i) Iron ore	(ii) molten metal	(iii) a steel girder.
(i) A tree	(ii) wooden planks	(iii) a table and chairs.
(i) Puzzled	(ii) thoughtful	(iii) solution found.
(i) Russia, 1916	(ii) U.S.S.R. 1918	(iii) U.S.S.R., 1922.
(i) France, 1780	(ii) France, 1790	(iii) France, 1800.
(i) Germany, 1925	(ii) Germany, 1932	(iii) Germany, 1945.

Continuity and Discontinuity—Evolution & Revolution

We have stated that we recognise a change by seeing. what is the same and what is different before and after. The difference may come slowly or it may come suddenly.

An apple has just fallen off a tree. I have seen it there for some weeks, a small green knob slowly growing into a full-sized apple until it has become a heavy weight on the end of a branch. The wind has now swayed it too far and its connection with the tree has snapped. All this time it has been the same apple— it still is, as it lies on the ground, but it is now in a very different condition. Fat and swollen, its connection with the parent stem has suddenly broken—a sudden discontinuous change. At one second fattening and ripening on the tree, at the next its period of decay has set in. But had I cared I could have examined the stem that

connected it to the tree during the past few days and I would have watched its gradual weakening, the loosening of the fibres as the apple swung to and fro, the gradual tearing of the fibres on one side, the slow but steady spread of this tear as the stem became weaker and weaker until finally, as the last few strands gave, one by one, the apple dropped to the ground.

Who would say this is a sudden change? Had I brought out my microscope I could even have watched the intermediate stages before each fibre gave, and written a world of history around the slow progressive changes that were proceeding.

Here then, looked at in perspective, is a sudden and discontinuous change; looked at in detail it is a steady slow continuous transformation. True the final outcome has been drastic for the apple, but the process itself has been a combination between continuity and discontinuity, an evolutionary change in detail that is equivalent to a revolutionary change *in toto*.

As the days go past I can see apple after apple fall from that tree. Slowly but steadily it is being denuded of its fruit—a continuous process made up of a multitude of snapped apples, a collection of discontinuous steps. *Continuty* and *discontinuity, evolution and revolution*, are two complementary features of change that interpenetrate. For certain aspects of any situation it is the discontinuity that is significant, for others the continuity. The whole process involves a unity of these opposites. The one implies the other. Both are an essential part of the totality of change. When the final dramatic drop of the apple took place, a new quality was emerging. It was a new situation.

Past, Present and Future

Again to raise the two questions, *What is it?* and *What was it?* immediately poses the new counter-question, *What will it become?* These three questions, each linked up so closely with the other that one cannot be considered without the others pressing their way to the fore, not only strikes immediately at the whole question of change, but raises the deeper question of how far the future is wrapped up in the past and the present; or, to put it more actively, how far it is possible from an examination of the past and a knowledge

of the present, to deduce how to mould the future. All that is really being asked is how we can best learn from experience. The first step therefore, is to discover if there is any systematic pattern that shows itself in all forms of change.

We have seen that we recognise things and situations by their distinctive qualities. We recognise changes by the fact that new qualities make themselves evident. We have already seen how important it is to the interpretation of an event or a statement that we should examine it in the light of the environment in which it occurs or of the context in which it is expressed Thus when we ask, *What is it?* we must also ask, *In what environment is it?* with corresponding questions regarding the present and the future environments. Unless we can appreciate the relation between the environment and the thing itself, watching the changes in both and in this relation, we shall find ourselves treating real problems of change as if they were the artificial problems with which formal logic is concerned. Let us therefore set out the following scheme as a reminder:

	Past	Present	Future
1.	What *was* it?	What *is* it?	What *will* it become?
2.	In what environment *was* it?	In what environment *is* it?	What *will* the environment become?
3.	What *was* the relation between it and its environment?	What *is* the relation between it and its environment?	What *will* be the relation between it and its environment?

The question we can now pose to ourselves in seeking a pattern in any changing situation is simply this:

What is it, in every process of change, that does not change?

It may seem at first sight a peculiar question to ask—what is it in every change, that does not change? But it is a crucial question because if we can answer it we shall be able to see something that is fundamental to change.

We can pose it in this way. If we take any two different changing situations, say, the birth of a child, and the dawning of understanding when we are faced with a difficulty, what is there that is the same in both? It is obvious what is different, *viz.*, the content or matter discussed or considered.

The answer we shall find in the next chapter is that it is the *pattern* or dialectical form of the change that is the same.

If we can once recognise something as basic as that in all changing situations we shall really have made a great advance, for such knowledge must help us enormously in seeing most complicated situations in the simplest possible way.

Form and Content

If we wish to pass on our ideas and feelings to others, we may do it in the form of a speech, an easay, a poem, a picture, a piece of sculpture, or a piece of music. Not all of these will be equally suitable for the purpose; that will depend on the content, *i.e.*, on what it is we wish to communicate. Moreover each of these forms has special subsidiary forms. Must the speech he emotional, or cold and logical? Must the poem be a lyric or a ballad? Must the song be solo, duet, or choir? We might say that to each content there is a form or shape best adapted to express it. This book has a certain form chosen because of the nature of its subject matter. Form means literally *shape*, and although we are using it in rather a figurative sense, what we are saying is that one does not put square pegs into round holes. Every shop assistant who has to wrap up parcels understands this relation between form and content. We recognise that form is not adapted to content when the shoe pinches, or when one's suit is too tight round the waist. This happens also when one takes a serious task too lightly; the form of one's behaviour does not fit the content of one's task. Teachers are concerned about it when they ask: "In what way shall a certain subject best be taught?" Science has a particular content and expresses this in its own peculiar forms. The educational system has a certain form or shape, with its primary and secondary schools, its universities and technical colleges, to cope with the content of educational instruction. A factory has a certain form of organisation designed to handle its special tasks. When we talk of the industrial structure of a country as being capitalist or socialist we are refering to the form of organisation that contains the productive capacities of its workers, helping in their development or frustrating them. Each political party—Conservative, Liberal, Labour, or Communist—has its own particular arrangements for bringing the ideas and the

nature of the contact with the individual members in each practice of its members to a focus—or for stifling them. The case reflects the content of the political ideas of the party. Each country by its political institutions—Fuehrership, Parliament or Soviets—provides the form of political system within which is wrapped up the whole social and economic set-up of the community.

Form and content therefore are exceedingly important factors to bear in mind in any study of change, for it must be clear that if content changes, form must also re-adapt itself intelligently, or there may be trouble. If the foot alters but the boot remains unchanged, corns develop; boot and foot no longer functions properly, and indeed, walking may become impossible. So it is with all contents and the forms that contain them. We have therefore to add to our table, something of this nature:

PAST	PRESENT	FUTURE
What was the content?	What is the content?	What will the content become?
In what form did it show itself?	In what form does it now show itself?	Will the form be adapted to the new content?
		If not, what is likely to occur?

A study of change implies a study of changing content and changing form and their changing relations.

CHAPTER SEVEN

THE SUCCESSIVE STAGES IN CHANGE

Every change involves newness or novelty. That is exactly what we mean when we say "a difference has occurred" or "something has happened," or "an event has taken place." To appreciate the pattern in such a process let us consider a few simple examples:

Nature and Nurture

1. A new born baby is fed at the breast. As the feeding continues the baby shows two characteristics. On the one hand it becomes more and more addicted to breast feeding; on the other hand that very form of feeding so strengthens it and helps its growth that its physiological needs are no longer satisfied in this way. It requires more solid food. Here then are two opposite or conflicting factors at work. One tends to keep it at the breast, the other, *arising out of that*, tends to make it seek other forms of food. Finally, by the time the latter drive has become sufficiently dominant to force a change in the system of feeding, the child is a new creature, with a life in certain ways independent of the mother.

There were two opposites present, the one aroused by the other, and that which was aroused finally led to a qualitative change in the situation, itself being changed in the process. It can also be seen as a struggle of content with form. The developing physiological needs of the child is the content and this has to be expressed in the form of feeding, each form pressing forward the content to a new stage, and each new stage of content forcing the development of a new form.

Interest and Boredom

2. Here is a case where human intelligence could, and has in many cases produced a different type of qualitative change from that stated.

A young man enlists in the army, keen to take part in the struggle. He starts his training, trains and trains and trains without cessation. After two years we see him a changed man. He is "browned off," he has lost interest, and his enthusiasm has gone. What has happened?

In the first blush of enthusiasm he enters wholeheartedly into his training. If this were carried on in a routine, unintelligent way, month after month with no indication that he is likely to be used for the purpose for which he had enlisted, the very fact of his enthusiasm would arouse a sense of anger and frustration against the powers that be who are not marshalling him in the way his energies require. At one and the same time, therefore, there is present in him an en-

thusiasm to work for the cause, through his superiors, and a rising anger against them almost proportional to this enthusiasm. The final outcome is that if the pointless training should continue. the anger dominates and transforms his enthusiasm completely, and there is little left but sullenness and finally boredom. He is not even sufficiently interested to be annoyed. He is "browned off." A good soldier will have been spoilt.

Two opposites would be present, the one aroused by the other, and that which was aroused finally led to a qualitative change in the situation, itself being changed in the process.

Ends and Means

3. In contrast, the way in which human intelligence may enter into a situation in such a way as to unite two opposites to create a desired effect can be seen in quite simple cases. For example, if a stone is scraped with a knife, there is brought into play a frictional force so that the knife itself is scraped and blunted by the stone. The action on the stone implies a counter action on the knife, the one brought into being by the other. The result—a distinct qualitative change in the knife—bluntness—an undesirable quality.

If, however, the stone is scraped in a skilled way, the opposite friction that is aroused on the knife transforms the qualitative situation in a different manner, and the knife is sharpened. Here the two opposites are made to give a unity of a desirable kind. The content is the need for sharpening the knife, the form is the technique of doing so.

Attack and Defence as Opposites

4. One of the simplest pieces of tactics applied by the Russians in the first great blitz attack by the Germans in June, 1941, was to allow the spearhead of the attacking tank formations to pierce the Soviet lines with such ease that they rapidly moved far ahead of their own supporting infantry. The result was that the tanks had to face attacks on all sides, since they were surrounded deep in their enemy's line, while the infantry were now merely a weak portion of the original line of attack with no mechanised support. In this case. of course, the change that took place were deliberately arranged on dialectical principles. The process was as follows. A mechanised attack expects to be met by mechanised defence,

and if that can be overcome the local attack succeeds, for the strength of the enemy is gone. Thus the Germans expected to arouse as the opposite to their vigorous mechanised attack a vigorous mechanised defence. The Russians presented as their opposite an apparently weakly defended line. The result is that the attack is encouraged to be pressed home until, its furthest point of advance, and therefore at *its weakest*, it meets the mechanised part of the opposite defence at *its strongest*, well behind the lines. This ensures that the prearranged opposite (the opposite aroused in an intelligent defence and not in a mere machine-like defence) becomes the dominant factor in changing the whole qualitative situation. The qualitative change corresponded to the conversion of a strongly attacking mechanised spearhead into a part of the front defended only by infantry shorn of their mechanised support. For the time being attack was converted into weak defence.

Ju-jitsu wrestling shows very much the same principles at work, where the object seems to be to allow your opponent to use his strength under such conditions that he is at his weakest in so doing. Thus the more vigorously he attacks, the more surely does he bring about his own downfall. To give way suddenly may be a surer opposite than simple mechanical resistance. Accepting the fact that Nazi Germany had succeeded in organising Europe for the production of destructive weapons, the U.S.S.R. has applied these and other variants of dialectical principles in its tactics and strategy, in order to ensure that the very strength of Nazi Germany may be her undoing. In that situation what was essential in all her withdrawals was to maintain her own army intact and with adequate mechanisation so that when Germany and her allies had lunged forward to their fullest extent she may strike her hardest blow.

The object of all planning, including the tactics and strategy of defence, is to ensure that the opposite called forth in your defence by the opponents' attack, shall become the dominant opposite to transform the situation into one having the qualities of weakness for your opponent that you desire.

5. At the same initial stages in the Soviet-German struggle the dialectics of the "pincer movement" tactic became important. The Germans relied on a special qualitative

from of attack, the power of the machine (the word *pincer* itself is a mechanical analogy) and by probing the front here and there, sought a weak spot to ensure the beginning of a pincer grip. Instead of opposing this in a mechanical way as the attack expected, and so showing the same quality of defence as of attack, the defence presented the opposite quality, an enormous number of spots suitable for the insertion of pincers. The result was that the pincer movements developed everywhere, each on a small scale. An enormous number of small pincer movements is no pincer movement, but a large scale battle in depth of interpenetrated fighting over a wide area, so that individual human ingenuity in meeting the broken ranks of the tanks could deal with the situation. Individual ingenuity was a quality in which it was presumed the Soviet soldier excelled. The qualitative form of the fighting passed over from being a steel line attack against a steel line defence, to becoming a large scale "digestive process" in which the troops of both sides fought hand to hand. The fighting reached a more primitive form, in a more highly developed way, fighting of a totally different quality.

Here, then, the first search for pincer opening, is presented with an opposite that offers a multitude of such openings, with a transformation in the situation as indicated.

Question and Answer as Opposites

6. A preliminary to the making of any plan to deal with a situation is the collection of all availablbe information relating to it. This involves at once the sifting of material and the judging of whether or not any particular fact is important. Merely to collect information relating, say, to a problem of output in a works is meaningless in itself. Before we can move one step, we have to ask, "What information is important?"

The data available, therefore, throws back at us a question, and to provide an answer involves us immediately in a mental and physical tussle. At the moment our task here is not to show how one decides on the relative importance of data. We know, however, that the only way to proceed is to scrutinise and examine this data, and arrange it on the basis of our past experience in what appears to be the order of

importance. Having done so, by this method we reach a *first* answer to the question.

Are we satisfied with the answer? To discover this we proceed to formulate a plan of action on the basis of our answer, and we put it into operation. The experience so gained is now new and additional data. It offers the next answer to the question, "What information is important?" for we have now a surer basis for our judgment We see that certain points had previously been over-estimated and others underestimated. We reconstruct our plan with much greater understanding. We have returned to our starting point, as it were, in a new mood and with a clearer vision A qualitative change has taken place, and this has emerged out of a struggle between the original answer and the contrast which was thrown up between action based on the provisional answer, and the experience gained thereby.

Very much the same process of attack and defence, question and answer, proposal and counter-proposal, suggestion and criticism leading to reconsideration and the posing of the next question in the light of what had now emerged, is fundamental in the preparation of speeches, lectures and talks, and indeed all forms of planned activity. To plan the successive stages in a joint discussion is to pose the successive questions that arise so as to lead to the appropriate answers, bringing the discussion finally to a head by posing the original question in such a form that the answer is now as evident and as complete as can be reached with the information at the disposal of the discussion group.

Example :

Here is a table.

QUESTIONS.	ANSWERS.
Who made it?	Jack Jones, the Joiner.
Did he make it all?	Well, he made it out of the rough wood.
Where did the rough wood come from?	It is pine; it came from Canada.
Who cut the pine trees?	Lumber men in Canada.
Who brought it here?	Transport workers, sailors, etc.
Is that all?	Well, stokers, engine drivers, etc.
Could it have come without means of transport?	No

Questions.	Answers.
Who made the means of transport?	Dozens of workers of all sorts, mechanics, other joiners, painters.
Who made the railways and the steel for the railways?	Steel mill workers, etc.
So Jack Jones only put the stuff together?	Yes.
What tools did he use?	Hammer, chisel, plane, nails, glue, sandpaper.
Where did he get these tools?	He bought them.
Who made the tools?	A whole crowd of craftsmen.
Where did the material come from for the tools?	Probably from different parts of the world.
Was the material just picked up in its finished form?	No, miners, refiners, smelters, foundrymen, transport workers, etc., etc. all had a hand in it.

Very well, let us start again.

Here is a table. Who made it? The workers of the world!

Conclusion: A table is a socially-produced article, a summation of human labour in a form suitable for human use.

We have written this short imaginary conversation in some detail because it is useful to see how each question arises out of the partial answer previously given, and how by a series of distinct steps a clearer understanding of the original question is finally attained. At each stage the information in each partial answer transforms what has previously been arrived at, until finally the original question can be posed in a totally different atmosphere from that at the beginning. The matter is then clinched, or question and answer are unified into a concise statement packed with meaning. A statement of this nature made at the beginning would not have conveyed much to its hearers.

Exercises

(i) Draw the same general conclusion, by starting with a match, a boot, a newspaper, a child, a useful suggestion.

(ii) A has a job at a fixed wage. By a series of question and answers of the foregoing type lead to the final statement: A worker in return for his wage, does not sell the product of his labour but his power to do work.

(iii) The Yalta Conference was attended by Roosevelt, Churchill and Stalin. By question and answer examine how it came into being.

(iv) Here is a copy of the 'Daily Worker'. By question and answer lead up to the conclusion that the cultural level of a community depends on its technical power.

7. An excellent illustration of the dialectical method of Question and Answer is to be found in "Marxism and the National and Colonial Question," a collection of articles and speeches by Joseph Stalin.

Question: What is a nation? he asks.

Answer: A nation is primarily a community, a definite community of people.

Then follows an examination of many cases from which emerges the conclusion—a more specific answer: A nation is not a racial, or a tribal, but a historically constituted, community of people.

A short further discussion and we refine it still further: A nation is not a casual or ephemeral conglomeration but a stable community of people.

Then comes the counter assertion, "But not every stable community constitutes a nation." Some may be politically stable for the time being. Hence the next question:

Question: What distinguishes a national community from a political community?

Answer: A national community requires a common language.

Conclusion: Community of language is one of the characteristic features of a nation.

Question: Why then do not the British and Americans constitute one nation?

And so after further examination of the facts we find:

Conclusion: Community of territory is one of the characteristic features of a nation.

Then follow further illustrations in which all the foregoing characteristics are present and yet the group does not constitute a unity: and so we are led in succession by the same method, in effect, of question and answer, at each stage the new question calling forth a demand for new data.

Conclusion: Community of economic life, economic cohesion, is one of the characteristic features of a nation.

And then again:

Conclusion: Community of psychological make-up which manifests itself in a community of culture is one of the characteristics of a nation.

Summing-up then we arrive at the final statement:

A nation is a historically evolved stable community in language, territory, economic life, and psychological make-up manifested in a community of culture. It is only when all these characteristics are present that we have a nation.

This completes the first general stage. But in itself it raises the next issue with which the book in question is concerned. *viz.*, The National Movement, for as the analysis implies:

"A nation is not merely a historical category, but a historical category belonging to a definite epoch, the epoch of rising capitalism . . ." and so to the next stage.

Notice how a series of successive forms of statement develops, each endeavouring to contain or embrace the ideas arrived at up to that point. We are witnessing the adjustment of form to content. Then finally the whole is brought together to complete a stage by giving a form of statement of what constitutes a nation. The gathering or changing content leads us compellingly to the final summated form.

Importance of the Backgroad

8. How a drastic change in the background within which two opposites are in operation can succeed in forcing an interpenetration between these opposites, can be seen in the pre-war drive towards a United Front against Fascism. As Fascism rose from strength to strength in Italy, in Germany, through Italian aggression in Abyssinia, and Italian and Nazi aggression in Spain, a widespread popular movement was evoked in all the European countries outside the fascist dictatorships, for a United Front against aggression. The first step was taken by the U.S.S.R. in entering the League of Nations, and, through its spokesman, M. Litvinov, pleading for agreements and alliances of the democratic countries that would restrict the growing power of the fascist governments. Behind this there rose a wave of mass feeling and mass pressure from the politically conscious element in every country, and from those who, not so politically understanding nevertheless sensed the danger that a free hand and an increase in the power of the fascist states would involve. This move from the U.S.S.R., and the rise of popular feeling—the International Brigade and the numerous anti-fascist committees were some of its later manifestations—were opposites called into being by aggressive activities of the fascists. A united front to be successful at that stage could consist not only of

Britain, France, Belgium, Holland, Norway, Sweden, Denmark Czechoslovakia, and if possible Poland, Jugoslavia and Bulgaria, but also of the most powerful anti-fascist Federation of States, in the world, *viz.*, the Soviet Union. This was the necessary form to express the content of anti-fascist feeling.

In the then European situation, this opposite to fascism was not fully achieved and therefore not sufficiently strong to force a qualitative change. The Munich Agreement that destroyed the independence of Czechoslovakia, and the Anti-Soviet policy of the Chamberlian Government that succeeded in sweeping away the Franco-Soviet Alliance, unseating the Popular Frount Government in France, and encompassing the defeat of the Republican Government in Spain, made it all too clear that the background of anti-Soviet and anti-democratic feeling among the principal governments was too strong. The problem that required resolution was becoming deeper and more intense. Nothing but a drastic alteration in this background could clearly make the policy of a united front against fascism a reality. When, therefore, the Chamberlain Government found itself at war with the German Government in 1939, we were merely witnessing the struggle between two powers both of whose policies were still anti-democratic. While the people of Britain were beginning to appreciate that only a strengthening of the democratic front could save Europe, the Chamberlian Government still retained a bitter anti-Soviet and anti-democratic bias. Indeed at one stage this country was brought to the verge of war with the U.S.S.R. in addition to the war with Germany, as the U.S.S.R. took steps to clear the Baltic air.

Then came the series of catastrophes in Europe that began to force the necessary alternation in the background so that the opposite, latent so far, might become a reality. The overrunning of Czechoslovakia, of Poland, of Norway, of Holland and Belgium of Jugoslavia and Greece, the fall of France and the catastrophe of Dunkirk—these were the objective changes in the background that aroused a new upsurge of feeling and made Europe ready for a complete change in policy. The first signal that a change in form was imminent came with the dramatic sweeping out of office of the Chamberlain government and its bodyguard of appeasers and erstwhile supporters of Hitler. Mussolini and Franco. With the

sudden aggression against the U.S.S.R. on June 22, 1941, the situation came to a head, and the announcement by Mr. Churchill of unity with the Soviet Union in the struggle against Nazism that same evening, symbolised the qualitative change in the situation. The United Front against Fascism had become a reality. The war had been transformed into an anti-fascist struggle, and every anti-fascist in the world could now throw its full weight into the effort. From that also the outlook of the democratic peoples in the struggle has steadily become clearer and clearer. This aspect of the qualitative change has shown itself in the fact that the expulsion of Abyssinia instead of Italy and Germany from the League of Nations, the collapse of the Franco-Soviet alliance, the Munich Agreement, the "non-interventionist" policy in Spain, the defeat of the Popular Front Government in France, the imprisonment of its Communist Deputies, and the inability of the Chamberlian Government to respond to the Soviet appeals for an alliance against Fascist Germany—all this is now rapidly becoming clear in its meaning to ordinary members of the public.

The old situation in which there existed a popular movement for a United Front against Fascism has returned in a greatly enhanced form, at a new qualitative level, in which the armed forces and the industrial power of the democratic states are being mobilised for that purpose. The appropriate form is being found to express the content of the anti-fascist fight. The high light in this development occurred at the Yalta Conference when the leading members of the great democratic powers pledged themselves not only to the final arrangements for the destruction of Hitlerism, but in the post-war years to the creation of a peace that would finally banish war and enable the peoples of the world to live their lives untouched by tyranny and want.

How to Describe Change

The language of dialectical materialism is largely drawn from the writings of Hegel, whose detailed analysis of change assisted Marx and Engels every considerably in their understanding and development of the subject.

Hegel also had his forerunner. He in his turn leaned heavily on Spinoza. To the latter the basis of everything was

a sort of Universal Substance, a substratum of all mind and all matter to which he gave the name God; and objective substance from which both mind and matter differentiated themselves. Through this medium all features of the universe were inter-connected. Spinoza therefore provided the idea of an inter-related unity.

On this background Hegel superimposed his concept of the changing universe as of a developing evolutionary nature. His task was to set out in a logically coherent form the underlying dynamic and the laws of change. On the one hand were the successive stages in the development of matter. On the other hand were the stages in the mental development of man, his ideas, his philosophy, this moral outlook, his rules of social conduct. To Hegel the creative feature of the universe was the mind of man, the growth and development of the Idea, how it controlled matter and fashioned it to its mental needs, and in so doing made manifest its own laws of development. Men, Hegel held, create their own history, and they create it by reason; but as they evolve, their vision becomes clearer. Each stage in history corresponds to a dominant outlook, partial and incomplete, and therefore not fully satisfying. Presently the contradiction between the idea and our physical needs reaches a climax and the idea undergoes transformation. Progress is then the passage by successive transformations to a sort of ideal state of perfect mental freedom. It was an idealist philosophy of history because it regarded the Idea as dominant over matter, and the concrete institutions that men built up were simply their attempts to give the Idea physical objective shape.

Marx turned all this upside down. Men make their own history, he agrees, but they do not do so in a mental or social vacuum. They have no alternative but to work and to think and to create under the conditions handed down to them by their forerunners. The background of each stage in development is the means by which men's material wants are satisfied, and man's new desires are evoked. Out of these arise social institutions. and the ideas and feelings of men. The driving factors lie in the material situation in which he finds himself, then in the ideas that emerge from this situation, and in his feelings about that situation; leading finally to action that brings a new and changed environment into being. The cycle then proceeds to the next stage.

It will be part of our task to see the detailed way in which these changes occur in social history, and how they are reflected in the mental and emotional changes in social life and in the individuals who live and work out thier brief span in each phase of society.

It will be seen, therefore, that whereas Hegel saw the idealised mind as the dynamic factor in change, and held that the final outcome of the whole medley of life was to make this Mind represented in perfect and concrete form in social institutions, Marx, and with him Engels, for the latter contributed in great measure to the analysis, saw the dynamic drive primarily in the material forces in nature, and that only after the mind and feelings of man had been aroused did they combine creatively with the material energy of man to transform the world about him.

While Hegel and Marx, therefore, were both dialectical in their outlook, Marx was a materialist as befitted one who based his whole analysis on the knowledge and understanding afforded by science. The notion of dialectical change must be placed to the credit of Hegel. The notion that it must be a materialist dialectic is due to Marx. He unified the dialectics of mental and of material change and established their correct interrelation. He and Engels worked out the precise details of this materialist dialectics in a large number of fields, and drew striking conclusions regarding the role of the various classes in society, and the movement of society towards socialism and communism. In fact they laid the basis for the scientific socialism so clearly planned and developed by Lenin and Stalin.

Recognising the linkage with Hegel, we are not surprised therefore that the language in which the subject is couched owes its origin also to the same source. Thus we have already come across the term *Opposites*. In any situation this is the name given to two interconnected aspects of that situation, the presence of the one implying or arousing the presence of the other, and each tending to transform the whole situation in mutually conflicting ways.

A situation containing two opposites of this kind is said to exhibit an *Internal Contradiction*.

As the critical point of this growing contradiction is approached the two *opposites are said to interpenetrate*, and a new qualitative situation emerges. The new quality that

emerges is such that these opposites no longer come into conflict, but, in changed form, give a *Unity of Opposites.* In that case the *Contradiction is Resolved.* With the completion of the change at the critical stage of the struggle—*i.e.*, when the quantitative intensities of the qualities have reached a critical amount—the coming of the new qualitative situation is referred to as the *Passing of Quantity into Quality.*

But the new situation is not different from the old *in all respects.* Because we recognise it as having a continuous history with the old; it is the same. The difference lies in the fact that the old contradiction previously present in it, tending towards disruption, has now been resolved. It is now more integrated, more organised, than before. It shows a return to the old situation at a new level in which a new contradiction begins to emerge. On the other hand the old contradiction may not be immediately resolved. It may be driven deeper by some superficial compromise and the situation become more disintegrated. more disorganised. A simple illustration of this is provided by the successive concessions to Hitler during the period of appeasement. Finally, the contradiction becomes so acute that the transformation occurs explosively. All this, as we have seen, can be described generally as the struggle of *content* with *form.*

Exercises

Discuss the following:

1. The contradiction between man's unlimited capacity for knowledge, and the realisation of his own limitations.
2. Nothing can be proved by dialetics, but dialectics may enable you to make something come true.
3. Hegel writes:
   "Necessity is blind only in so far as it is not understood."
4. "Freedom does not consist in the dream of independence of natural laws, but on the knowledge of these laws, and in the possibility this gives of systematically making them work towards definite ends." Engels (Anti-Duhring).
5. "Two Mamalukes were undoubtedly more than a match for three Frenchmen; 100 Mamalukes were equal to 100 Frenchmen; 300 Frenchmen could generally beat 300 Mamalukes, and 1,000 Frenchmen invariably defeated 1,500 Mamalukes." Napoleon.
6. The struggle between dependence and independence on the part of a young man who has just reached the wage-earning stage.
7. What is unchanging in change is its dialectical pattern.

CHAPTER EIGHT

MISCELLANEOUS QUESTIONS & ANSWERS

I.

Among critics and reviewers of dialectical materialist writings, knowledge of the subject is at best second or third hand. In no other field, certainly in no other scientific field, would individuals otherwise quite honest, dare to pass judgment with so little understanding. Pages could be filled with criticisms that are profound only in their ignorance, and that would hardly dare be expressed on any other topic with so much assurance and so little knowledge, without arousing an accusation of dishonesty.

In this chapter a few topics are dealt with briefly, mainly concerning issues that might be raised in the portion of the subject so far treated. At the end of later sections we shall endeavour to meet criticisms corresponding to the content of these sections also.

No attempt is made to knit them together: each small section may be regarded as an exercise, the answer to which is provided in the short discussion that follows.

* * * * *

1. *Do Dialectical Materialists Think of the Universe as a Vast Machine?*

Not *dialectical* materialists. Those who attack materialism are happy to decry it by attacking those mechanists or mechanical materialists who do assert that in some sense the world is a fully determinist affair, in which every movement, no matter how detailed, is capable of being predicted *if we only had sufficient data*. But an attack on mechanical materialism is not an attack on diatectical materialism, and those who confuse them, or imagine there is no fundamental distinction, are at least guilty of ignorance. Let us try to make the distinction clear.

Let us begin by seizing on the phrase in italics above, "*if we only had sufficient data.*" This is a trick of words, for clearly of sufficient data implies that ignorance is banished, then of course there is nothing left but knowledge. Actually

we and the world around us are not like that, and dialectical materialists are concerned with things as they are, not as we might imagine they might be. For in our relation to the universe there are two opposites that continually arise and transform each other—ignorance and knowledge. In the field of human practice. advances in knowledge occur as a result of struggle with ignorance. Every propagandist knows that. Every scientist knows it. Every teacher knows it. Men struggle in ignorance to acquire knowledge. Every piece of knowledge acquired suggests new fields to conquer and therefore exposes new ignorance. All knowledge in operation has to be tempered by an additional piece of knowledge, *viz.*, that it exists in a background of ignorance.

In what form does this knowledge show itself? It is seen among other things in the scientific laws which describe the regularities we have found in the universe. In fact, the statement of a scientific law as a summation of the knowledge in a particular field. is itself an instrument for further discovery, for examining deeper into the field of ignorance. In this process. as a dialectical materialist would expect, scientific laws are themselves transformed. They have to be recast to embrace a wider and wider range of knowledge. In detail this arises from the fact that by means of the law new facts are discovered experimentally that stand in contradiction to the law that helped them to come to light. This is simply the dialectical process of change in operation in that field of human activity we call science. The history of every branch of science underlines the truth of this simple dialectical point.

But the dialectical materialist can go further. Since there are various levels of material change—those of electronic and electromagnetic changes, those of atomic changes, those of gross matter such as machines, planets and sun, and those of whole universes in groups, so various corresponding levels of regularity have been discovered by scientists. Each level corresponds to a slice of the real world. But the laws are different for each. Just as the modes of behaviour of individuals are one thing, and those of social groups are another, although, as we can easily see, they interlock, so these laws refer to different classes or levels of qualities. True, the qualities shown by a piece of "gross" matter are bound up with those manifested by atoms when the latter are in close association;

and the qualities of atoms are bound up with those manifested by sub-atomic particles like electrons and protons in close association. For the moment we merely stress the point that the distinctiveness of the qualities at these levels implies separate sets of laws showing the regularities of their changing forms; while the special form of inter-connectedness between the levels implies interrelation between the laws at different levels. The general outlook of dialectical materialism suggests the possibility of all this, quite apart from what may have been found in scientific research to check it in detail. But in point of fact these various laws and their interrelation at different levels do constitute some of the most interesting and searching problems in scientific research.

Now the laws that show the reguluarity of behaviour of gross matter—the Newtonian laws as they are called—were the first to be adequately explored, and the results of investigation into this field of science were rich almost beyond measure, and certainly beyond expectation. The method of study was a determinist one. Thus liquids, solids and gases were made to move in such carefully selected circumstances that when the major features of the circumstances were repeated, the subsequent motions also repeated. The same experiment in the same circumstances gave the same result. Scientific technique on the experimental side consisted in setting out the same circumstances and the same experiment. Here then were situations that gave exactly predictable results. The process could be made to repeat. Out of this grew the machine, an artificially constructed group of material parts which, when set in motion and driven forward, repeated the same sequence of operations over and over again. Its performance was completely predictable—at least almost completely. The machine became the prototype of mechanistic determinism. The outlook of the mechanical materialist rests on the belief that *all* processes in nature are of this type. Of course it left the scientist himself, the man who made and designed the machine and who investigated the regularities in nature that enabled him to design such a machine, completely out of the picture.

Now the significant point to notice about mechanical materialists is that they take the laws that show themselves at the level of machines and planets, and remaining unconscious of the outlook that sees levels of laws amid the multi-

plicity of qualities in the universe, assert that *all* laws are of the *mechanical* type; and that all phenomena must ultimately fall within the scope of such deterministic laws. The law of the machine becomes a sort of divine guide that leads the whole universe inexorably along its course; from the giant stars through man and bacteria down to the electron. Man as a source of thought and feeling, and as a *maker* of human and social laws, has no distinctive place, not the maker but the made. Dialectical materialism has nothing in common with this kind of mystical metaphysics.

An interesting point in this connection is that the heyday of mechanical materialism was the early eighteenth and the nineteenth centuries, at the time when the power of the machine for transforming production was becoming more and more recognised. Its importance in the whole scheme of production, where it enabled values to be increased enormously and so led to a stupendous rise in the curve of output, can be understood. It opened the door, as it were, to an era of plenty, and in it men saw the means to their earthly salvation. Society began to adapt itself to the tempo of the machine, and as was to be expected, these adjustments found their way into the whole outlook and ideology of the period. Mechanical materialism as an outlook on the universe seemed therefore a perfectly natural development. To-day with a recognition of the tremendous changes that the machine has wrought in social life, and with an understanding of the new forms into which men can change society if they care, the machine may still function to the benefit of man instead of as at present to his destruction, by a new approach to this whole question. The point to note here is, however, that mechanical materialism is the ideology of the early stages of the machine age, and those who profess it, even within the body of scientists to-day, have not yet outgrown the ideology of that period. It is in this way that dialectics can come to the aid of scientific men, that they may be able to appreciate not only the limitations of their outlook in this respect, but the new vista of understanding that is opened up to them.

The cult of the machine of course implied the narrow dogma of rigid determinism in all things. Dialectical determinism broadens out its scope. Instead of man being the slave of the machine, and the victim of inexorable laws he cannot evade, he becomes the controller of the machine, cap-

able of turning it to the expansion of his power over nature, providing him with the means, if he will, of developing society and social living along the lines that history has shown man capable of doing. Dialectical materialism shows not how man's history is determined for him, but how he can himself determine his own history. With increasing control over his own way of life, but with a full recognition of the necessities of the situation, man becomes, for the first time, the conscious maker of natural law, the laws of social development. Dialectical determinism for man becomes dialectical freedom. The first step towards that end has been taken in the U.S.S.R.

2. *Do Marxists deny Freewill?*

To deny freewill in the individual is apparently to assert that he is either a machine in which all his actions are uniquely determined, or there is no rhyme or reason in his behaviour. Marxists deny both these, but they deny also that freewill has a meaning as a thing in itself. An individual is a source of energy. He thinks, he feels, he acts. The social and material environment in which he acts impresses itself on him, giving a meaning and content to the ideas he forms about the world around him, and to his desires in relation to them. Some of these material factors are, as it were, immovables. He simply has to adjust himself to them. They are necessities in the situation. For example: he must breathe, eat, drink and sleep. Any idea of action which ignores them is incompatible with his survival. Freewill action opposed to them becomes meaningless. We must always therefore say that *freedom* and *necessity* go hand in hand. They are two complementary opposites. But the limitations are not merely those immediately apparent around us in the form of simple physical restrictions. There are strong social and personal restrictions, respect for others, taboos, rules of social conduct generally, that are so ingrained in our way of thinking and feeling that we cannot imagine ourselves acting counter to them. When we speak of freewill, therefore, we have to remember that it is within these that the stream of freewill flows. More than this. Human beings, as we have seen, are individuals who plan the future. Having learned from the experience of the past, they are able to prophesy what is likely to emerge. This is their science. This also becomes a factor which they have to take into account in applying their

energy to changing the world about them, and to planning what it may become. Given all this—an understanding of the past and an appreciation of its implications for the future, a knowledge of the material limitations of the present, a knowledge of one's own limitations and one's own power—then the human being can and does pour his creative energy into the making of change. In the sense that this understanding of what can be done, and the desire or choosing to do it, are features of the human being, to that extent can we say that he is expressing his freewill, or his freedom in action, or, if we like, his *feeling for action.*

Freewill or freedom of action is one aspect of a situation of which the recognition of necessity for the action is the opposite. The unity of these opposites presents the situation which, with the application of human energy, leads to changes by the individual.

But an individual who increases his knowledge of any situation, thereby tends to show up more and more sharply what has to be done by himself. The unknown factors, as they diminish in number with gathering knowledge, remove with themselves factors of uncertainty. Stated otherwise, this means that the fuller the knowledge the greater the decision—or compulsion—to act in a particular way, if for no other reason than that the number of choices are in general reduced. When this occurs we are witnessing a progressive unity between necessity and freedom. When the choice becomes unique as a result of such knowledge, when it is clear that all other choices must be discarded, freedom and necessity merge into one, and pass into action.

It is worth noticing that the exercise of freewill in this sense, by large numbers of individuals, is what brings group regularities and group laws into being. The regular traffic on the railways to and fro between the great cities, each passenger choosing of his own freewoll to make the journey, is something on which the railway companies can depend with fair exactitude, irrespective of who the individuals are. They can take steps to arrange for it in advance, when necessary, by placing special trains at the disposal of the public. The individuals who apply their freewill energy in this way, by their joint action, bring into being social laws or regularities in the mass which are in fact the mode of their group behaviour.

3. *Are not Materialists self-seekers, and Idealists self-sacrificing?*

This is simply a confusion of words. There are two meanings to the words *materialist* and *idealist* in the English language, and people who have little understanding of philosophy easily fall into the trap of confusing their respective meanings. It is true that in ordinary speech we contrast a materialist and an idealist as we contrast one who is self-seeking with one who is self-sacrificing. Thus a materialist in ordinary speech is one whom an ordinary person tends to despise and to distrust. We feel there is something low and depraved about him. On the other hand we regard an idealist as a person with lofty intentions, who has a view of world perhaps so high that ordinary people like ourselves are unable to aspire to it.

In this book, however, we are using these terms in a more exact and technical sense. A materialist is a person who recognises that life, thinking, and feeling, have all developed at a comparatively late stage in the history of the world, and that matter in its many forms, including energy, is therefore primary. In seeking an explanation of the many problems which men meet in their struggle to survive and to build up a way of life, he turns in the first place to a study of the material forces at work, and the way in which these conditions arouse thinking, feeling and action. He examines in what special circumstances thinking and feeling, ideas and emotions, may become so important as to become the main driving force for any course of action; but he always has clear the fact that these ideas and feelings have themselves been aroused and directed by material circumstances and are applied in a material situation

We can contrast this with the outlook of the idealist who insists that ideas and mind are the primary stuff out of which the rest of the universe is created. He may even deny that the various forms of matter which he perceives are anything more than mental concepts. The history of the world is seen not as one of complex forms of changing matter (living, thinking, inanimate) but of the expression of mind. He would deny that thinking and reasoning have a history of development interlocking with the history and development of

material forms, but he would assert that they stand outside material things, with absolute laws of thought and absolute rules of logic. While a materialist, therefore, looks outwards first, and so is enabled the better to understand his inner self, the idealist looks first inwards and consequently doubts what he sees when he turns his eye to the outer world.

It will be seen from this that a thoroughgoing materialist will be very much concerned with the part he has to play in shaping social life. To an idealist, however, these things are of little importance; his own mind and feelings tend to occupy the centre of the stage. The rest may be a figment of the imagination.

That is why this book is so much concerned with social and political issues.

4. *Do Dialectical Materialists ignore personal relationships, and individual uniqueness?*

They do not. Personal relationships are valued as highly by dialectical materialists as by other people. Since to them every situation is unique in certain ways, possessing a combination of qualities all its own, the uniqueness of a personal relation is not uncommon. What dialectics enables one to do, however, that is denied to any other philosophical approach, is to appreciate the changing forms of such relations and therefore to sense these in a very special way. To know and sense the quality of friendship is to appreciate also its limitations. How else are we to develop it in all its richness? To become conscious of its progressive growth, and co-operatively to set about building it up, is surely in itself a stage in personal relationship. with a quality all its own: and this is precisely what dialectics enables us to do. For every one of the dialectical laws —those dealing with opposites, with the passage of quantity into puality, and with the resolution of contradictions—all have their meaning in this situation; all bring out facets of friendship unrealised by those who deny that dialectical materialism has anything to say in personal relationships.

There is of course the final point that the whole outlook sees the individual and his personality within society as an environment that drastically conditions and may even restrict. This outlook is common to many other social philosophies and is certainly accepted and put into operation by all communi-

ties that demand the ultimate sacrifice from its members in the defence of the group. Side by side with this, however, has to be placed the fact, borne out by the experience of the U.S.S.R., that a society whose structure and development is integrated in a dialetical way, calls forth from its members a new level of devotion and self-sacrifice, of self-reliance and of original thought and action. A society so constituted develops depths of feeling and understanding, and facets of personality hitherto unexampled.

5. *Does Dialectics Dispense with Science?*

It has sometimes been asserted by those who have never taken the study of dialectics seriously, that there is no point in pursuing it, for science has succeeded very well so far without it. It cannot therefore be a good substitute for science. What discoveries, it has been asked, can be placed to the credit of dialectical materialism?

Dialectics does not dispense with scientific enquiry, with political theory and practice, with the need for social investigations, with a study of past history, with the medical profession, and so on. It needs them all because it underlies them all. Because it is basic, it integrates them. Look at medical theory and practice, for example. If I feel ill I go to a doctor to be cured. He examines me and finds that according to the text-book I am suffering from, say, influenza. I am treated as an individual, cured as an individual, and am ready to be sent back to my home and my work. A week later I have influenza again and the vicious circle is repeated.

Is it I who have the influenza, or the community or both? To a profession based on an individualist philosophy, influenza can be cured by treating those who get it. To a dialectical materialist it is obvious from the beginning that influenza is a social ill-health and that I and many others are the particular spots in that community through which it manifests itself. True, I have to be cured, but the problem of influenza in the community as a whole is a very different problem from that of influenza in me in an isolated situation.

Medical science may devote time and energy, as it does, to the personal problem, but its science will be fundamentally deficient unless it can attack the wider issue. What is true of influenza is, in its way, true of almost every other disease,

certainly of occupational diseases. Enlightened medical men may see all this; they may even recognise another elementary point in dialectics, that specific diseases may, sometimes steadily, sometimes discontinuously, change their qualitative form, throwing up a wide variety of different types. If one is a dialectician one need not be a medical man to know this. If one is both a medical man and a dialectician one is doubly armed and doubly alert. But it does not suffice for enlightened medical men just to know this. If they are dialectical they will immediately recognise the nature of the restrictions that are being imposed on the activity of the profession, and on its scientific work, that prevents it from attacking just such problems. There is no organised social medical service. There is no freedom to practise social medicine, and therefore social medicine is in a primitive condition. But if social aspects of medicine are basic in this way to a true study and treatment of disease and ill-health, it follows that medical theory is crippled before it starts. More than this. They will see at once that what is true of medicine is equally true of other branches of science. For corresponding factors restrict and direct the course of engineering science, of physical and chemical science, and more important still, of social science generally. We can see in what direction this leads. Only an integrated scientific service in which all aspects play their part, based on the idea that science emerges from the community to deal with the problems of the community by direct communal planning, can meet the situation in a satisfactory way. It is in this direction in the first place that dialectics can make and does make its contribution to scientific knowledge.

But notice that this does not dispense with already established science. It needs it. What it does do is to give a basis for estimating its significance. It does more than this. It makes a scientific man more conscious of what he is doing in his actual technique. It helps to suggest to him many-side applications, possibilities and changing forms. It helps to suggest generalisations and limitations that can be drawn from his conclusions. He can see samenesses and differences between this and that experiment, this and that theory. He looks for situations in which contradictions may be expected to arise in the applications of his theories, and be knows consciously that the time must come when he will be compelled

to recast his conclusions to make them fit the gathering exceptions.

During the past generation scientists in all countries have been faced with the contradiction that the more developed their science, the greater the potentialities for social disaster. Those who have pointed this out have been accused of "blaming" science for our troubles. No dialectician would make this accusation, for a dialectical materialist can see how the direction of science and the use to which it is put is conditioned by social forces outside the immediate control of the scientist *qua* scientist. He sees the social pattern that contains science and scientific enquiry. In pointing out this "mis-use" of science, he has merely been striving to make the scientist more dialectical in his outlook, to increase his social awareness. Those who have not the mental stamina to face up to the consequences of this approach have fled into the laboratory with the cry "don't mix science with politics." Why not? Why must scientists be afraid of experimental mixings? It will spoil the purity of their science, they maintain; as if the pursuit of theoretical enquiries on the constitution of the atom that leads to explosives of greater and greater potency is not in itself impurity in that sense.

If it is true to say, as it is, that dialectical materialism needs and is based on science and knowledge, it is even truer to say that science cannot possibly reach its full bloom until it is itself consciously impregnated with dialectical ideas.

6. *Is there a Purpose in Nature?*

The word purpose has meaning for us only in connection with the actions of living beings. We have seen how, for example, human beings succeed in anticipating the future; this has led us to consider how this understanding of the course of nature can be unified with our understanding of our own powers and energy to work out and to carry through a plan. The plan is conceived in such a way as to reach a certain effect or conclusion or end. In such circumstances we say that we show purposive action; and even those living beings less capable of thought than human beings, but still capable of thought in some degree, may be said to show a purpose.

Not only an individual but a group may show a purpose.

A highly organised and complex society like the U.S.S.R. shows a social purpose. Their successive Five-Year Plans are all purposive in their intent, at a certain social level. Purpose therefore is man-made as far as social life is concerned, and to suggest that there is any purpose other than what man himself can create and does create is to use the word *purpose* in a non-sensible way. The question becomes devoid of meaning.

7. *Is there an end to Space?*

Space is not capable of being separated from the changing material objects and other processes in the universe. It is the neighbourhood or environment. Wherever there are physical processes there also is space. The question "Is there an end to space?" may have a meaning if by this we mean also "Is there an end to matter or energy?" meaning thereby that all the matter or energy in the universe may be concentrated within a finite radius of our system. That may quite well be the the case and in many ways is indeed suggested by modern physical theory and experiment. But this is not what is usually meant when the question is asked. It is usually implied that in some way there is a sharp line or surface of separation, on one side of which there is space and on the other—nothing! Stated in this way we see how meaningless is the query. Any test that could be applied to discover whether there is an end to space—a real physical test, and not a mere set of words—would in itself imply the existence of matter in or near the region tested so that that region would by that very fact rank as space!!

8. *Does the Universe Exist?*

Who asks this question? A non-existent being? Of whom is it asked? Are these words? Whence did they come? To whom have they meaning? In terms of what have they meaning? We need not pursue it. The possibility of asking the question in itself implies the answer—Yes. To say No is to make nonsense of the question. It is stupid to ask such a question.

Notice, however, that to deal with this matter in this way does not mean that it is unimportant. That depends on whether there are people who consider it to be important. If it

should be argued, for example, that the universe does not *really* exist (whatever that may mean), and that therefore what is all this fuss about war, unemployment, poverty, and worldly goods generally, then it becomes important not only to point out the stupidity of the original assertion, but also to point out the conscious or unconscious reason why it is being advanced.

There is a further point. It is possible to be so clever that one becomes foolish. This occurs, for example, when mathematicians and scientists who have immersed themselves in mathematical symbols as a help in explaining the processes that occur in nature, finally forget the processes themselves and remember only the symbols. Then, when with all the weight of their authority as scientific men they tell us that the Universe is *in reality* merely a mass of symbols, we can perceive that they are well on the way to denying the existence of the universe. It is just as if we were to deny the existence of the house and assert instead that only the word *house* exists and the relation of this word to other words. The danger lies in the fact that their denial is expressed in such complicated mathematical terms that the ordinary person simply cannot cope with it. The danger is increased, as we have pointed out, when the people who make the assertion have great scientific standing. The damage spreads when foolish clergymen, who themselves cannot follow or criticise, reiterate these stupidities from their pulpits; and its social significance can be seen if it is realised that all this has in fact happened during the period of social distress and confusion that finally led to the whole world war situation. Because the minds of men were thereby being deflected from applying their knowledge and understanding to the solution of the vital problems of this world, in this subtle way, it becomes important to point out the absurdity of the original question. Otherwise it would not be worth while wasting any time on it.

9. *What is a Solipsist?*

A solipsist is a person who says:

(i) All I experience are sense impressions, that is, all I know are sense data. I can never get beyond this.

(ii) All I can do is to apply my reasoning powers to

these sense data and arrange them in some sort of organised connected way, a logically connected way. I have this logical sense or power.

(iii) It follows that I am the creator of the universe but not the creator of the sense data themselves. These are simply given or *are*, but unless I were there to perceive them they would not exist in any meaningful sense, because they are *my* sense data.

(iv) This position cannot be refuted by any process of logic that any one else may apply, because whatever you say is simply some more of my sense data, as you are yourself also.

On grounds such as these the solipsist argues that he is *IT*, and that his justification for being *IT* lies in the assertion that he himself cannot disprove it to himself.

It will be seen that the solipsist is an individual who seeks to isolate himself in imagination from his whole social context. If what he said had any sense in it there would of course be no case for his talking about it to anyone else (*i.e.*, to himself!) and certainly no case for writing books about it to convince anyone else (*i.e.*, himself). He writes in a special form of language—English or French or German. What are these languages? Simply his sense data?

Does he never learn from experience—even the experience of his own sense data, and therefore is his logical sense always the same or does he become more logically acute? If so, how can he rely on his logical make-up to tell him anything final and positive about his very own universe? How does he manage to keep on surviving? Is the food he consumes also sense data, and whence did it originate?

We need not pursue this form of madness, but clearly it proceeds from an exaggerated individualism. The solipsist not only makes himself the centre of the universe but the universe itself. The confusion arises from an inability to see that before man was *man* he was a social animal, a part of something larger then himself, and that this sense of being *IT*, an individual, unique and peculiar, the receiver of what happens outside, is simply a sign of how group life has succeeded in growing internally as it has developed externally.

The social importance of dealing with this issue is pre-

cisely the same as that mentioned in connection with the question, Does the Universe Exist?—with which indeed it is very closely connected. Otherwise it is a sheer waste of time to bother about it.

10. *Does Human Nature Change?*

Human nature is the sum total of the ways in which human beings behave. This is expressed in their thoughts. their feelings and their actions. We have already seen how these change pesistently with gathering experience and have had an inkling of how the various modes of social organisation canalise these forms of human energy Thus what *does not change* is the fact that there is human energy that expresses itself. What *does change* is the way it is expressed. It is in this way that human nature is continually being transformed. There is no special desire of an unchangeable type to accumulate wealth, to become a capitalist, to hate one's father, to love one's mother, to be kind, to be brutal, to steal, to be sinful, and so on. All these are possible capacities that human beings may show. Which of these will manifest themselves at any moment will depend on how men are organised in social life. In a society organised on a capitalist basis or on an individualist basis, men will struggle to adapt themselves to that organisation and so show the characteristics of capitalists or of individualists. In a communist form of society they will again react differently, and human nature therefore in each case will show itself in a characteristic way. But men also learn from experience That is indeed an unchanging characteristic of human beings. And so it is always part of human nature to be critical and to strive to transform their society in the light of gathering experience. To suggest that human nature does not change is to forget the very significant way in which human society, and there fore with it human nature, are always forcing changes on each other.

Marx—Scientist or Philosopher?

In certain parts of this book we have spoken of the debt which Marx and Engels owed to Hegel, and to certain of their predecessors. Let us examine the contribution of Marx from another angle. For unlike Hegel, Marx belongs also to the materialist tradition of science, and it is the extent to which

he was impregnated with the scientific spirit, and to which he appreciated the transformations that science was to make in the way of life of social beings, that differentiated him so sharply from his predecessors in the field of philosophy.

In the region of physical science the name of Newton is associated with the earlist successful attempts to state scientific laws of change for non-living matter. Newton in fact is the outstanding figure of the seventeenth century, when scientific men turned in earnest to discover the underlying regularities of the material world. His work, and that of his colleagues and successors, helped to revolutionise our knowledge of the movements of the heavenly bodies, and in particular of the place of the earth among them. With the name of Newton is associated the laws of mechanics, and behind that, the philosophical outlook which regarded all aspects of nature as basically mechanical in type.

To Newton, and indeed until the nineteenth century, the world was one vast complex machine, of which all the aspects one encounters in one's daily life were merely small interlocking cogs. It was natural, of course, in these circumstances, since every machine has an engineer to tend it, that Newton was satisfied to place God in the background as the matchine-minder. It was a naive conception, but a not unnatural pair of irreconcilable opposites, the completely undetermined God and the completely determined machine, to expect at that period.

By the time the full effects of these theories of mechanism had found their way into practice, both in the world of industry and of science, sufficient facilities of a technical nature were available to make a more precise study of living beings a possibility. The advances that began to take place in the field of biology were to be expected as a consequence of the success in physcis and engineering. Darwin became a possibility. The voyage of H.M.S. Beagle and similar expenditions were not only technically possible, but became an adjunct to the collection of scientific material. In the early days of the nineteenth century he had already collected sufficient data to justify, in broad outline, his theory of evolution which brought out the place of man among the animals, as Newton had earlier brought out the place of the earth among the heavenly bodies. Both scientific men dethroned man from the place he had hitherto held as a unique being, specially created

and occupying a specially appointed central position in the scheme of things. Just as Newton was the forerunner of a whole series of later physicists who carried through their investigations of material nature almost to the outer bounds of space and to the inner recesses of the atom, so Darwin by his broad generalisation and his carefully documented evidence, raised issues concerned with the origin of species, that were fertile for scientific study among his successors. The field of genetics is concerned precisely with the problem of how successive generations of animal and plant life develop special qualities, and in what respect these became stable and hereditary.

For us the important thing to notice is the fact that in a sense the work of Darwin and the biologists can be regarded as having been indirectly stimulated by the work of Newton and the physicists. It was Marx, however, who provided the social and historical picture in which these developments found that logical and natural place. Already in 1848, in the *Communist Manifesto*, and in his earlier writings, Marx had set out the nature of the regularities developed in social life when man (to Darwin only a biological type) interacted with the material world (to Newton a mere physical situation), developing in the process a series of more and more complex forms of social organisation and of social beings of a biological nature, more and more highly integrated and developed.

Let us look again at the philosophical ideas that lay at the base of this developing scientific standpoint. The Newtonian view tended to think of each scientific problem in isolation, a sort of disembodied machine at work. To discuss the motion of the earth, the whole of the universe is obliterated and replaced by an abstract force of attraction pulling the earth towards a certain fixed point, a position the sun would have covered. This force becomes the final cause of the motion of the earth. So it is with every other problem. Each effect is regarded as having had its cause, the later being itself the effect of a further cause. Thus the Newtonian conception provided an abstract picture of the universe in the form of a series of linked causes, with of course a first cause—God. There was complete determinism in this abstract picture; but thought, feelings, emotions, none of these played any part. Newton himself was absent from his own picture. With Darwin the position is the same, and different. Having set out the various forms in which living beings have shown

themselves throughout past ages until the present day; conscious, therefore, of a succession of qualitative stages, he turns to a search for *the* cause of biological change. The theory of the survival of the fittest is Darwin's attempt to provide the causal motivation. But notice that the nature of the causes has also undergone a change. In Darwin's view it is the relation between the animal and its evironment, whether living or non-living, and the struggle it carries through to survive, that is responsible for the changes in type of species. But in the main it is a one-way system. This environment changes the type of animal, but the animal, except in rare cases, scarcely affects the environment at all. In any case Darwin is not very much interested in the changes in the environment in this connection. These, as it were, would be problems that related to Newton. We recognise, therefore, that basically the Darwinian approach is a mechanically cause-effect relationship in the peculiar form he considered applicable to changes in living beings.

The break-away from this mechanico-biologic viewpoint introduced by Marx represents a qualitative change in the nature of the philosophy of explanation. He, of course, is mainly concerned with the historical period that corresponds to the existence of human beings living in socially organised groups. To him, therefore, the social group is itself a causal factor, affecting on the one hand the material environment of the group, and on the other hand conditioning the individual member of the group. The social factor from the standpoint of causation is highly complex. It is a feature at a higher level of organisation than the individual. It shows features of a psychological, emotional, and physiological nature; there are legislative and educational factors present. All these interpenetrate and interact on each other, and as a system, show change. Deeply embedded in them, underlying them, are economic factors and relations governing the way in which these operate in providing food, shelter, and material development. To Marx must be given the credit for exposing once for all how these levels of social and individual qualities act and interact on each other, and for setting them out in a rational pattern so that the manner of their unfolding may be clear and apparent and so act as a guide to social action.

In tracing the way in which a pattern of changing social forms is engendered in such circumstances, Marx introduced a

philosophy of explanation for change in general, and for social change in particular, which accords him a front place not only in the sequence of scientists Newton, Darwin and Marx, but in the sequence of philosophers of whom Hegel was his immediate predecessor. Marx's break-away from tradition can be seen perhaps at its sharpest in the fact that belonging to both traditions, by unifying them, he broke away from both. In so doing he set into motion the new sequence of scientific socialists, Marx, Lenin, Stalin.

CHAPTER NINE

THE DIALECTICS OF SOCIAL CHANGE

The Panorama of Social Change

It is reckoned that no more than 500,000 years can have elapsed since primitive man roamed the Earth. We can picture him, and the rest of his colony, living in trees or in caves, his body covered with hair, holding his own in combat with the wild beasts of the forest, feeding on nuts and roots or on the flesh of his prey, tearing their bodies asunder with his nails and teeth. Throughout these hundreds of thousands of years many catastrophes have befallen him; changes in climate, floods, famine, tribal wars and bitter struggles to survive, have driven him hither and thither across the surface of the Earth. If throughout this long period we estimate an average generation as roughly thirty years, he has lived and battled with nature and with other men for roughly 15,000 generations. It is not very long. Throughout the greater part of this period he has remained a wandering savage, the prey to fears and superstitions, the victim of natural forces and of oppression by other groups of men, gradually building up modes of survival, protection against the vicissitudes of nature, collecting and storing food, domesticating animals, developing agriculture and slowly building up a settled social economy. These 15,000 generations have seen many changes, but the greater and more fundamental of these have been comparatively recent. Let us try to gain some sort of picture of the nature of this transformation. Suppose father and son for these 15,000 generations stand in a long row one behind the other, say a foot apart, extending in all 15,000 feet, or roughly

three miles, a distance equal to that from the centre of any modern city to one of the nearer suburbs. At one end stands the representative of primitive man—almost a wild animal himself, brutish, low-browed, fierce, with the narrow vision of the hunting animal, and the jungle fears and terrors of the hunted. As we pass down this row, slowly and almost imperceptibly he changes, his way of survival, his powers of survival, his group living, his social pattern (primitive as it is), his food, his clothing, his speech, his ideas and his thinking, his feelings and his forms of emotional expression. At each stage of this procession stand others around him, thinking and feeling like himself, grouping and clinging together, in families, in tribes, in communities. If we regard the period of *civilized* man as starting roughly 10,000 years ago, it follows that for the greater part of his period on Earth, man has hardly been distinguishable from a wandering savage. One hundred yards from the modern end of this procession men are beginning to use tools and simple agricultural implements. Periods of social stability and of rapid social change alternate, and forms of social organisation follow each other in comparatively rapid succession; tribal economies and slave states, villages cluster round castles, and serfs till the soil and fell the trees. Towns spring up, ships sail the seas, merchants come to life, artisans acquire skill and craftsmanship; inventions, factories and machinery, modern industry, colonies, cities, empires and modern wars. All this within the last hundred years.

If this vast stream of human growth and development had been set out on a film lasting one hour, for 59 minutes the upward struggle of man from the primitive stage would have occupied the screen, and the whole history of civilized man would have flashed past within the last minute. With what speed these changes have come upon us can be realised from the fact that the machine age, with its factories, mines and workshops, its steam power, internal combustion engine, motor-cars, Atlantic liners, electric light, telephones, and cinemas, aeroplanes, wireless communication and television, bombs and poison gas—all this would have occupied less than one and a half seconds, ending up in perhaps the greatest climax of all, World War II.

It is not the comparatively short time occupied by each of these stages that matters, startling as they are, but the quali-

tative social stages that men have brought into being and then transformed. With the growth of natural knowledge, and with the development of understanding of how to organise and to apply that knowledge, the tempo of change has increased in an ever-rising crescendo; and modifications in social living that might conceivably have been slow and steady have followed each other with explosive rapidity. If we are to appreciate the dialectics of social change it is the last few seconds of this film that we have to examine, for therein can be found the laws of change in their most fruitful formative period.

The Dialectics of Social Change

Any aspect of nature that shows characteristic qualities is a legitimate subject for study, and by an examination of its make up *in opposites*, in relation to the background or environment in which they exist, we can see the qualitative changes that occur, in a rational way. Our purpose in this section is to examine briefly by means of our method of analysis the nature of the changes that have occurred in human society. We can do this here only in a broad general way, for we have to bear in mind that since any social activity is itself composed of numberless detailed changes, there is no limit to the depth to which such a subject may be probed by this dialectical method.

We shall therefore content ourselves with a general survey of the stages or phases that have shown themselves in social development, and seek the nature of the opposites in each such stage that can be held responsible for the transformation to the next stage. This should at one and the same time give us a method of approach to a rational view of past history, and an indication of what the future holds in store. More than this; it will provide a background against which we can see and interpret the way in which people at different stages have thought, felt and acted. We should be able to discover whether the social and political purposes people had in mind when they undertook action of any nature did in fact hinder or help to bring about what did finally develop.

Let us begin by reminding ourselves of the fact that we are late-comers on the face of the Earth and that we have developed some sort of organised life in our struggle to survive. We

have succeeded in protecting ourselves against certain of nature's forces by discovering how to exercise control over them and turn them to our advantage; or where this cannot be done so far, to evade their full consequences. We cannot prevent earthquakes but we can build houses sufficiently strong to withstand shock, or sufficiently light for the damage to be slight.

But while organisation of sorts has been created by us, side by side with it we have also to take note of disorganisation. The world to-day is full of illustrations of the co-existence of organisation and disorganisation, and the battlefields are the stage on which this objective struggle between them is proceeding. Organisation is being disorganised, and disorganisation is being organised. It has been in this struggle with nature and with our fellow men that we have fashioned certain aspects of the world and out of which we have ourselves been fashioned.

We have been talking and writing about "ourselves" as if we have existed throughout history. In one sense we have. The film picture with which this section opened is our picture. We identify ourselves with this series of ancestors as if we were it. We are the continuation of their biological make-up, of their social habits and of their ways of thought. We are the same as they are, in the sense that we are continuous with them in certain respects, and we are different from them in the sense that many of their habits and customs, many of their illusions and false viewpoints have been condemned, destroyed and transformed. We can look back at them and understand the limited lives they led, the reasons for the difficulties they experienced in their social organisation, the problems they had to solve, and the way they sought to solve them. They were unable to look forward to us; but to-day, in virtue of the fact that we can indeed draw fundamental lessons from the changes that have come over us in the past, we are now in a position to look forward to some extent into the future, and to condition and direct it by our deliberate actions to-day.

Some people find difficulties in thinking of a group in society or even society itself as being more fundamental than the individuals of which it is composed. They cannot disentangle themselves from the self-centred idea that they are self-contained isolated individuals, and that it has only been by

the voluntary association of such individuals as themselves that society can be said to exist. The physical world would continue to be whether or not you and I were suddenly blown to pieces. That should be very obvious to-day in the midst of a violently destructive war. In the same way social life, organised and disorganised, continues to carry on, develop, change, sometimes slowly, sometimes drastically, irrespective of Tom Jones or Jack Johnson. Tom and Jack are born into it, are conditioned by it, fed or starved by it, think its thoughts, share its ideas, its truths and its falsehoods, make their small contribution to its activities and finally pass out. Society persists, individuals pass through it. Both are changed in the process. We are first social beings before we are anything else. In that sense we are the same as other people. Side by side with this, no two of us are alike. We are all individuals with special peculiarities. We can think of the peculiar experiences we have had in our lives and we feel that no one else can possibly have had anything similar. We have struggled with our special difficulties and we are certain no one else can ever have had difficulties such as these. Yet we know that to-day we are closer to our next door neighbour or to the first passer-by in the street than we are to the thoughts, ideas, customs and valuations of our ancestors 7,000 years ago. We can look back on people like ourselves who had precisely these illusions of special unique characteristics, who peopled the Earth 100, or even 10 years ago, and we can see how much they belonged to their period. So also do we. It may be difficult to appreciate the extent to which *we* are creatures of our day, but it is not difficult to appreciate the extent to which our forerunners were. So, therefore, are we. This is not to deny that an individual is an individual, that he has a distinct personality, and that personality is something which we all prize and value. It is simply to deny the fantastic notion that you or I are self-made men, or that there is no one like unto us. That outlook, as we shall see, is itself merely a reflection of a particular period of social life out of which we are at last emerging—the period of intense individualism. This intense sense of separateness is itself therefore evidence of the extent to which we are not separate, of the extent to which we breathe the atmosphere of our social period. The fact that some of us are not so acutely self-conscious is evidence that we are living in a society that is already divided

on this issue, that this special quality is already undergoing transformation. Society is changing and as it does, these two opposite characteristics manifest themselves.

CHAPTER TEN

HISTORICAL MATERIALISM

Our task is to examine the forms of social or group organisation we have built up in our past history, to uncover the pattern of changes that have been formed and to discover the nature of the forces that were responsible for making the precise kind of changes that occurred. This field of study is usually called Historical Materialism, and the method adopted in its analysis will become clear as we proceed. In essence it is an application of the ordinary methods of science. For science is concerned with the nature of the changes that come over objects, groups of objects, and masses of energy. It is therefore concerned with their historical changes. For example it deals with the successive stages in the evolution of the solar system, and exposes the pattern of changes through which it has passed. In explaining these it links each detailed step with corresponding changes under other conditions in other forms of matter. It shows that each step is itself a kind of regularity already seen to occur in the physical world, in a wide variety of other circumstances. Now the important point to notice is that all scientific explanation of physical historical changes is always expressed in terms of other physical phenomena and never in terms of, say, spiritual characteristics. When Kepler argued that the planets were kept on their courses round the sun by the guiding hand of angels, he was giving a pre-scientific explanation. No scientist now would dream of offering such a theory in explanation. All scientific explanations are physical in content, or as we shall say—materialistic. In that sense Science is a form of Historical Materialism.

The method of Historical Materialism then is Scientific Method. Spiritual theories of natural events are not put forward to explain wars, strikes, profits, wages, social standing, kingship, revolutions, governments and their policies,

churches and their policies, educational institutions and their policies. This does not mean that human beings are regarded as lumps of material just as one may regard a planet or a stone. We think, feel and act. In that sense we are different from inanimate objects. We are conscious of our thinking, feeling and acting. We plan, we look into the past, and we anticipate the future. We take steps to deal with probable future events. But all these forms of behaviour are features or characteristics of living physical beings, and therefore they enter quite legitimately into explanations of natural processes involving ourselves. Because physical science is concerned only with inanimate objects or non-living masses of energy, factors of this type do not enter into its theories. Historical materialism is no less materialistic because it couches its explanations in terms both of material things and their properties of thinking and feeling, for the latter are also in that sense features of the world around us and of ourselves. Historical materialism has no place for super-natural theories to explain natural phenomena. It rejects them as being unscientific and unverifiable.

Engels in Anti-Dühring states the general approach very clearly (Anti-Dühring, Part III, Section 2) as follows:

"The materialist conception of history starts from the principle that production, and with production the exchange of its products, is the basis of every social order; that in every society which has appeared in history the distribution of the products, and with it the division of society into classes or estates, is determined by what is produced, and how it is produced, and how the product is exchanged." We notice that the level of analysis is at that of the social group, and is not for the moment concerned with the individual's reaction to the social organisation, or indeed whether one can say that the society is conscious of the way it is organised. Problems such as these arise later.

"According to this conception," he goes on, "the ultimate causes of all social changes and political revolutions are to be sought, not in the minds of men, in their increasing insight into eternal truth and justice, but in changes in the mode of production and exchange; they are to be sought not in the *philosophy* but in the *economics* of the epoch concerned."

This does not imply, be it noted, that ideas of truth and justice, indeed that philosophy, literature, art and pure science are without influence on the course of events. On the contrary, as we shall see, they can have a very significant influence. What it asserts is that these have themselves also to be seen and assessed and used in the context of the changes in the modes of production.

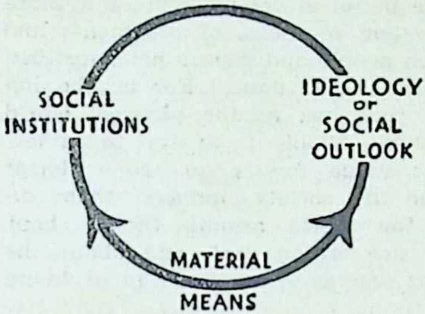
"The growing realisation that existing social institutions are irrational and unjust, that reason has become nonsense and good deeds a scourge," he goes on, "is only a sign that changes have been taking place quietly in the methods of production and forms of exchange with which the social order, adapted to previous economic conditions, is no longer in accord. This also involves that the means through which the abuses that have been revealed can be got rid of, must likewise be present, in more or less developed form, in the altered conditions of production." And here he brings out the related function of the view through its analysis and its philosophy:

"These means are not to be *invented* by the mind, but *discovered* by means of the mind in the existing material facts of production."

Let us consider the problems of social change, then, from this angle. The justification for this approach will show itself if it renders a confused situation clear and rationally connected, and if it therefore guides us in our actions on social matters.

We must begin by looking for such aspects of social life as seem to have remained relatively constant or unchanged throughout history. That is to say we seek the samenesses from one form of social organisation to the next. After that we can proceed to discover the differences, and these will enable us to recognise when one phase or stage passes into the next. We shall thus underline the qualitative changes that have shown themselves.

Sameness. Throughout the period of written history, and, as relics show, also throughout the period of more primitive social life, three features seem always to have been present. They are indicated by the following diagram:



Material means of survival refers to the methods adopted to gather or hunt food and store it; to primitive and then later more developed methods of agriculture, and the domestication and breeding of animals; to the kinds of tools used, whether they be the early flint axes, bows and arrows, wooden spears, metal axes, knives, swords, hammers, etc. At a later stage it refers to the raw materials of the soil and under the soil, the more and more elaborate tools and machinery used for their treatment, to the resulting food, clothing, and shelter; and *to the way in which all this is organised within the social group.* This comprises the catering for the practical necessties of social groups.

Ideology refers to the prevailing outlook of the people at any stage, the ideas they take for granted, the beliefs they hold, the religious and social customs they carry through, and the taboos they accept. These range from the mystical beliefs about wild animals and evil spirits of the early hunting tribal system, through the sex and fertility rites of primitive agricultural days, through the accepted beliefs, ideas, and valuations of the feudal system, the outlook of the feudal lord on the duties of the serf; and the outlook of the serf on the rights of the feudal lord. They pass to the commonly accepted ideas of right and wrong in social life and organisation in the industrial period, to the growing desires for freedom and liberation on the part of oppressed peoples and classes, to the multitude of accepted ways in which people amuse, educate and train themselves, to the theories that are propounded to justify this and that in society; to the forms of art, music, literature and science and to theories concerning them. Talking in a broad general way, we can say that throughout the ages there has been a sort of philosophical outlook lying behind social life and growing out of the way

in which people have lived. The outlook has, of course, changed from stage to stage in social development, but there has always been such a system of ideas, of judgments and valuations, in terms of which people and classes have justified and explained the things they have done. For us the important point to realise is that just as the physical world about us induces us to think about it, to try to understand it and to judge its value for us, so the material way of life of a people in society induces them to build up theories about the world around them, about the society in which they are taking part, and about the morals, arts and crafts, that emerge from this way of living and working.

Institutions. These comprise the actual buildings and the nature of the organisations associated with these buildings, that serve to put into practice or to teach the ideologies of the particular period. They consist of the churches around which are wrapped the beliefs regarding a next world, and many dogmas regarding reputed happenings of a mystical nature in this world. They include the schools, public and private, within which the younger generation is taught the traditional beliefs of the social group, or to practise the arts and crafts and the sciences of the period. There are the universities where young men and women are trained as teachers in these schools, educated in the theology of the period, trained to look backwards in history to past periods of culture as something from which we have decayed, rather than forward to the future towards something we can consciously create. Here also, however, grows up a nucleus of young men and women versed in modern science and contributing by their research towards solving the problems of their day. These institutions also comprise the Law Courts that safeguard the legal rights of individuals and of classes, enforce these legal decisions, and the military for offensive or defensive purposes whose function it is to maintain the power of the state of that period, whether it be dominated by an absolute monarch, a system of feudal lords and barons, property owners, merchants, industrialists, financiers, or a working class. Finally, in more modern times there is a Civil Service and Parliament; political parties that reflect the outlook of certain sections or classes in the community, and by various forms of pressure attempt to influence or direct the nature of the legislation

passed by Parliament, and put into effect by the Civil Service, the Law Courts, the Police Force and the military authorities.

What we have just said, confining itself to the *samenesses* that have shown themselves throughout the history of social life, brings out the following features:—

1. At every stage of society there are found:
   (*a*) Productive forces and technical means of production alongside some form of social organisation to apply them.
   (*b*) A predominant ideological outlook that emerges out of the way of life of each period of society, and seeks to justify its continuance unchanged in its essential form.
   (*c*) A system of institutions, educational, legal, military, civil, religious, that seeks to ensure that the way of life and the form of organisation of the productive forces shall be continued unchanged.

   There have been differences even within these samenesses. We note, for example, the absence of systematic forms of compulsion to maintain unchanged the early form of society known as Primitive Communism. In these circumstances, with the land held as common property and everything acquired by the group remaining the property of the group and not of any particular privileged section, change in social make-up could proceed untrammelled by any artificial restrictions directed towards convincing everyone from childhood that a specially privileged class must remain specially privileged. Let us notice that in such a primitive society there was no exploited class, but let us notice also that the absence of any organised forces to maintain this form of Communism made it possible the more easily to bring an exploited class into being by force and so undermine the form of the society.

As soon as we dig below the surface, we discern other features also present at each stage.

2. The level or fullness of social life rises with the growing means of production, and its corresponding technical level.

This means that ideas, desires, understanding and criticism expand side by side with expanding technique in production; and this is to be expected since it is from the increased

experience of the producers that technical improvement results. Thus the three aspects brought together in (1) are not separate and independent, but develop together, or at any rate they cannot remain fixed and unchanging. They are interrelated.

3. Within the period of written history, with the exception of the U.S.S.R., there has never been a society in which social position is uniform throughout. There has always been *a dominant class which has owned or controlled the means of production, and therefore also the distribution of the proceeds of production.* The body of people who have carried through the actual work of production—the spade workers—is in general the lower class, the slaves, the serfs, the hired labourers, the workers, technicians and paid administrators.

Diverse Features at Successive Stages

We have now to turn to the new or distinctive qualities that have shown themselves at different stages in social history in order that we may distinguish the successive stages in social change.

The first point we notice if we look at the world as we know it to-day, is that West of Europe and the United States of America correspond to a certain stage of social development. Their inhabitants are accustomed to telephones and telegraphs, to electric trams and electric trains, to motor-cars and aeroplanes, to cinemas and to television, to town and city life, to factories and workshops, to railway stations and power stations, to industrial accidents and industrial diseases, to death rates and unemployment figures, to life insurance and industrial insurance; to novels and biographies, to text-books and newspapers, to strikes and lock-outs, and the thousand and one aspects of social life we hardly notice, so familiar have they become. All this is typical of our age and our stage.

Five hundred years ago, in Western Europe, not one of these things was even thought of. True there were craftsmen, and guilds for craftsmen, towns we would to-day reckon as small villages, merchants who came and went, sailing ships that ploughed their ways across the smaller seas bringing merchandise, oils, perfumes, and silks, from the East to the West, and returning with the products of the craftsmen from

the West to the East. There was no British Empire, the mere beginnings of a Navy, no strong sense of national unity. The United States of America did not exist. The level of life of the agricultural labourer was hardly higher than what we accord to-day to our cattle. But there was a wealthy merchant class, already vieing in importance and in power with the aristocrats and the court, owners of merchant vessels, lending money to kings and the queens, advising no policy and even interfering in legislation. Along the banks of the canals in Venice they were building their palatial residences that still stand to this day as a sign of the splendour they had achieved during the hey-day of their power; and in Lombardy and in the centres of trade and commerce across Europe, under their guidance, banking and finance were beginning to play their part in the economy of Europe. If to-day is the period of the industrial magnates and of mechanisation, and all that the latter has meant for the social life of the people, five hundred years ago was the period of the merchant class, merchant trade and navigation, and all that these activities meant for the life of the people then.

Backwards another five hundred years and we are in the Feudal Period. There is no industrialisation. The merchants have only just begun to come to Europe. In each area the feudal lord in his castle dominates the situation. The spade work of life is carried through for him by the serfs and their supervisors. The centre of power is the Manor, and of religion and ideology—the Cathedral. Once again there is a dominant class and a subservient class, differentiated by the fact that the superior class owns and controls the life and energy of the peasant and the serf.

Summarising then, we seem to discern at least three definite phases in social life, feudal, merchant, and industrial, each with its own special qualities not shared by the others. All three, however, have this in common, that they are all class divided.

Exercises

1. Compare and contrast the way of life of members of the owning class in each of these three periods.
2. Compare and contrast the way of life of members of the working class in each of these periods.

3. Compare and contrast the system of education for the two classes in each of these periods, where such a system existed.
4. What were the positive contributions to social progress made by the coming of the merchant class, and of the industrial capitalist class?
5. What types of organisations, if any, existed in each of these periods to safeguard the interests of the working class?

There were stages prior to the feudal period which, however, we shall not examine in this small book, and there have been developments from industrial capitalism, *e.g.*, the period of imperialism and finance capitalism. Because the latter are all simply more developed forms of capitalism they are frequently grouped together with the merchant period as the era of *Capitalism* in distinction to the era of *Feudalism*. We shall examine the reasons for this grouping and this distinction shortly.

But there has been another development in one part of the world beyond the stage of capitalism in any of its forms, viz., the Socialist state represented by the U.S.S.R. Here the way of life of the people is different again from that in *all* the preceding stages. All the technical advances of capitalism have been absorbed, but there is no longer a dominant class and an exploited class. Class division, which was common to pre-existing forms of society, is gone; and in addition there is a mode of living and a system of valuations and judgments that sharply distinguishes it from capitalist and feudal modes. Thus bringing together the various forms of capitalism we can say that broadly we can distinguish the three following phases in social change:

FEUDALISM	CAPITALISM	SOCIALISM
A class-divided society of feudal lords and barons on the one hand, and serfs on the other.	A class-divided society of merchants, industrialists, financiers and share-holders on the one hand, and of industrial, technical, administrative and earners on the other.	A classless society of workers and peasants owning, controlling, developing and operating the means of production and distribution.

Governing Institutions

Autocracy	Parliament	Soviets
Councils of Lords and Barons.	Republic or limited monarchy, representation of aristocracy and merchant bourgeois class. Later, representatives also of working class and of capitalist class, industrial and financial.	Representatives of all types of workers and peasants. and peasants.

These are the stages in social change but this does not bring out the dynamic connection between them, or how these changes have arisen. That we still have to do. Moreover we must not make the mistake of imagining that each of these periods is as sharp and distinct as this discussion might seem to suggest. Even in Western Europe to-day, capitalist countries are at different stages of development, while in the midst of a capitalist world the U.S.S.R. has itself been built up. Just, therefore, as the next stage in social organisation shows itself visibly to-day, so in feudal times the next stage in social development—capitalism—began to make itself evident. Or, stated otherwise, just as to-day in a world ripe for socialism, capitalism still maintains itself, so in the era of capitalism feudal elements still remain, slightly tarnished, but still there.

But to place feudalism, capitalism, and socialism side by side as if they were simply three stages in the evolution of social man and little more, would certainly create a false impression. The revolutionary break with the past stands out sharply if we watch the shifting forms of the successive economies, and the position of the worker in relation to them. The feudal economy was one of direct subsistence in which the product of the labour of the serf, and later that of the small peasant, passed directly without exchange into consumption. This was even the case with craftsmen working on fixed wages and purchasing at fixed prices. As the merchant class grew, an increasing proportion of what was produced passed first through the process of exchange as commodities before it was finally consumed. With full-blooded

capitalism we reach the final stage in this profit process where everything becomes subject to the laws of exchange, including even the labour power of the worker himself. This becomes evident as the state of affairs today, when we realise that hardly a person, outside a small section of agricultural workers, actually consumes what he himself produces. Even the Lancashire textile worker wears cheap shirts produced in Japan; and brain workers and executive workers, teachers, lawyers, and all the professional class are far removed from the direct process of production. Everything they use has to be bought "on the market." We see, therefore, how a distinctive process under capitalism has been one in which the producer has become completely divorced from control over the means of production. It is this fact which has to be borne in mind when we talk of the coming into being of a proletariat; for the proletariat is not merely a body of workers created by a form of modern industrialism, but a *dispossessed* body of workers operating an industrial machine which is not their own, and selling their labour power on the market for a price or wage just as if it were any other commodity which is bought or sold. Finally we can see how merchant and industrial capitalism distinguishes itself from feudalism, in that the whole of this situation could not have developed its capitalistic form without also the creation of a world market for the world sale of the commodities, and the world purchase of labour power.

In all this we can appreciate how drastic and revolutionary has been the incidence of capitalism in social economy, and what a tremendous change has consequently occurred in social relations. To-day we can realise this even more dramatically than ever before. Drastic however, as have been the consequences of the coming of a capitalist economy, in a deeper sense there has been no break with the past. First we have to notice that from the tribal stage until the latest phases of capitalism we have an entire epoch of class-society, which Marx and Engels regarded as the period of Pre-history. It has been a period in which men have struggled with each other for their personal gain, in which individuals and groups have made war on the community for their own advancement, exterminating their fellow men, enslaving them and degrading them in varying degrees. In this struggle history has indeed been made, but it has been

made without any understanding or control over its total direction.

In the second place, both under feudalism and under capitalism, the necessary factors for the continued economy of each of these periods have remained in the hands of a privileged class; in feudal times the land, under capitalism the machinery, the raw materials; under both, power over the right of the individual worker to employment.

With the coming of socialism the revolutionary break with the past stands out sharply. For here we have the fundamental needs of the economy in the hands and under the control of the workers themselves—land, raw materials, machinery, education and the whole organisation of industry. With this comes also control and development of science and technology to fertilise and enhance the powers of the worker; art, literature, and cultural pursuits for the masses. With a scientifically organised planned economy in production and consumption the fetters imposed by commodity production under capitalism are burst asunder. Socialism gives to commodity production radically new qualitative features.

Exercises

1. Point out any features of feudalism that have survived to the present day in Britain.
2. In what sense can it be said that the educational system of this country is capitalist? In what sense can it be said that the educational system of the U.S.S.R. is socialist?
3. Trace the various stages in socialist understanding that have developed within the framework of capitalism, explaining where these are consciously socialist, and where they are simply the first efforts on the parts of workers to unify themselves against exploitation. Illustrate with reference to the trade union, co-operative and political labour movements.

CHAPTER ELEVEN

HOW SOCIETY CHANGES

So far we have written merely about the successive changes through which society has passed. We have still to uncover the internal contradictions, growing in each phase of society as it works out its logical development; for it is these contradictions that make necessary the change to the

next phase. Each stage, as we have seen, rests on a distinctive material basis. Certain economic resources are at the disposal of the society—the land and its raw materials, the tools and machinery for transforming and increasing the value of these raw materials so that they may be used by members of that society. Tools in themselves are not enough. Labour and intelligence contributed by the workers have to be applied to the running of these machines, and the transformation of the raw materials. Thus there must also be a reservoir of human energy for the handling of the tools and machinery of a given period, to repair them and to design new and more improved types. For these things cannot remain static. The transformation of raw materials by the application of brain and brawn to the tools at the disposal of the workers, at the same time transforms the tools and machinery themselves. Human beings learn from experience. Not only do they learn to become more and more skilful, but in the learning they scheme out new methods of economising in their own labour. Out of this develops improved technique, and an understanding of facts of nature not previously perceived. In the last resort it is on this basis that the science of a period finally rests.

This was true in the feudal period when peasants and woodmen had to till the soil, fell trees, produce axes to do this, build primitive cottages for themselves, dig and hew stones, and make chisels and mallets for that purpose; build castles and cathedrals. One requires only to look at the complexity of construction of an early church to realize how much knowledge and technical experience must have accumulated in the hands and minds of the workers of that period.

This was true again of the days of the great merchants, when workmen had to design and build sailing ships to cross the seas and the smaller oceans, to make compasses, to read the stars and so develop not only the principles of navigation, but a knowledge of the earth as a heavenly body. In their sailings they learnt of the peoples of the Earth, how these various peoples lived, what they produced and what they knew. When we talk of the Revival of Learning at the end of the Middle Ages we do not mean merely a sudden interest by scholars in the ideas and writings of forgotten epochs in history, but an accumulation and release of knowledge and

experience of the world gained as a result of the activity in the period of merchant enterprise. Men began to discover what their fellow men knew in other parts of the globe, the kinds of societies and the peculiar customs in those societies they had created; and they discovered with what tools and on what basis these societies were being created.

The merchant took the work of the artisan and the craftsman for granted. He purchased the ships and the articles they made and arranged for their transport to other places where they might be sold for more money than he had himself paid for them. The artisan and the craftsman took the merchant for granted. They organised themselves into crafts and guilds, classified the various grades of skilled workers, and laid down stringent codes for entry into their professions. They handed over the product of their labour at fixed prices and generally speaking set up forms of social institutions appropriate to the economic make-up of the period. In doing so, merchant and craftsmen alike fixing a rigid framework for society, as if the later were for all time to remain inflexible and unchanging.

But the merchant, demanding as he did the passage of sailors and travellers to diverse parts of the earth, was a necessary factor in the spread of enlightenment, and in particular of the spread of knowledge of navigation. To the goods, through the handling of which he possessed himself of more and more cash, he added nothing. Nor did he deliberately set himself to add anything; but to the feudal society that gave him birth he was dynamite. Contrast him with the industrial capitalist who grew out of him, as it were.

The latter set out on a new task. He sought ways of adding value to the articles he bought and sold. For this purpose he mobilised the labour and skill of the workers, by buying not the product of their labour but their time and the energy they could expend during that time. Out of that came an ever-increasing supply of commodities of ever-increasing value. In that process the economic position of the craftsman was fundamentally transformed. New social institutions began to take shape. The factory took the place of the workshop of the individual craftsman. Men were massed together at the bench. They began to understand the principles of mechanism and they developed a thirst for the new knowledge and the new sciences that were rapidly

emerging. A spirit of enquiry, a critical spirit began to arise and they used this widened capacity to think about and to analyse their own problems. In their struggle for survival in a period of brutal exploitation in mines and in factories where men, women, and children worked long, dreary hours from early morning till late at night, they discovered the meaning of united action and sensed something of the power they possessed in combination. Hence developed new institutions to express this new outlook. Not without struggle, hardship and victimisation, Trade Unions, Co-operative Societies and workers' political parties began to take shape.

Social Outlook as the Opposite to Social Practice

It is in this way that we can see how each stage shows a distinctive economic structure, embodying the ways in which people are used to apply their labour in production. Each period shows a definite and distinctive relationship between production, and those whose labour is used in the process. those who control or own the machinery and materials of Out of this active process we can see emerging a distinctive outlook of the people in response to their experience in that situation—ideas about the world, ideas about their way of living, and criticisms about the kind of life they are compelled to lead. These ideas and emotions express themselves in practical form through the institutions they erect, either for defence or for attack or simply for summating the knowledge they have gained.

The workers are not alone in reacting in this way to their environment. Those who utilise this energy in production are also alive to the meaning of society for themselves. They combine with or organise against other employers. They seek for legal enactments that will make this or that development of their activities easy. They seek to remove obstructions that have come down from the past. They unite to influence legislation, and strive to give to the whole State apparatus a bias that will perpetuate their position. When they have succeeded, the State, usually regarded as a benign impartial machine for the dispensing of even-handed justice, becomes an instrument of the economically dominant class.

The picture therefore of each epoch, showing material means of production side by side with an ideology and social

institutions, is false if these are supposed separate and distinct. They interact as opposites in the sense that ideology and social institutions are evoked or arise from the influence of the material means of production on the people who operate them, and in their turn finally change and enhance these forms of production. It is the essence of a materialist view. This is one of the key principles of Marxism.

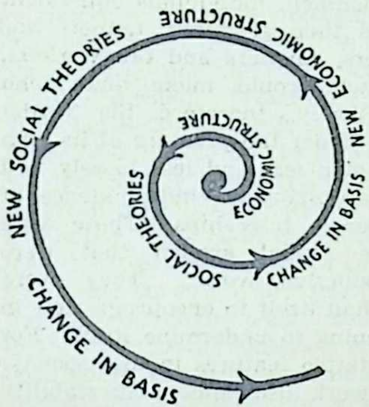


Figure 2 should more accurately have been something of the nature of a spiral rather than a circle. The economic factors and productive relations in society arouse ideas, outlooks, theories and criticisms, which through human action tansform or change the economic basis and productive relations, thus completing one circuit of the spiral; the process then proceeds to the next stage or the next level. There is an interpenetration of opposites and a qualitative change to a new level of social organisation.

Moreover because each stage of society has been class divided, it shows a tension or struggle. Two opposing factors are present; one seeking to maintain the *relation* between owners and workers unchanged and so keep intact in a static and unchanging way the make-up of society; the other, frustrated, learning gradually from bitter experience what possibilities the future can hold for them, seeking to change the situation to its betterment and so struggling as a class against the class structure of society.

The fact that a situation of this nature has been present in all forms of society, with the exception of that now in the U.S.S.R., is the basis of *another key principle of Marxism*—that all previous societies have been class divided and the scene of *class struggle*. It is this that marks off the U.S.S.R. from all previous forms of society.

Let us put in simple form a statement of how the changes can now be seen to have pivoted about these opposites.

Feudal Period

To carry through the necessary work of this period there were required peasants and woodmen, individuals equivalent to foremen and managers, and then gradually tanners and leathermakers, simple toolmakers, smelters and ore workers, chainmakers, and craftsmen who could make and mend swords, coats of mail, etc. Slowly, therefore, the feudal system was itself changing, and under the pressure of its own needs creating a body of craftsmen less and less loosely tied to the feudal lord, gradually acquiring an independence of their own and grouping together in townships. These were the slow changes within the feudal system that were altering the nature of its productive work. They were changes that the feudal system had itself to encourage, and in doing so that system was beginning to undermine itself. For it meant the birth of new qualitative features in that society. But there were other factors at work also sapping the stability of that period. For their banquets and court receptions, feudal lords required spices and oils, perfumes and herbs, laces and finery. For the management of their estates they required organisers and tax-collectors, clerks and advisers— and moneylenders. Thus the merchant class, at once necessary to the feudal lords and feared by them, found a footing, acquiring political and financial power, owning caravans and ships, exchanging and selling greater and greater quantities of merchandise to the townships in return for the product of the work of the artisans and craftsmen that the feudal system had itself created. Feudalism had brought its opposite into being, and its days were numbered.

The critical struggle that brought it virtually to a close in England was waged during the Civil War in 1649, and in France during the Revolution of 1789. The gap of more than 100 years between these gives an indication of the unevenness of development in Europe, while showing the larger steady trend towards the elimination of feudalism as a whole.

The nature of that war must be understood. It was a war in the last resort between two groups of exploiters to decide who should have the right to exploit. It was not in itself a direct struggle to emancipate the working people, the serfs and the artisans, from having the outcome of their labour fliched. Whichever side own in this struggle the outcome, as far as the peasants and workers were concerned, was very much the same. But it was necessarily their labour, their energy and their lives that had to be used to carry the struggle through. When the Civil War came to an end, it was their hopes that were frustrated, and against them that legislation was introduced to prevent their achieving the freedom for which they had fought. The Cromwell Distatorship was as much a safeguard against the lower orders as against the possibility of a counter-revolution by the aristocracy, or at least that section of the aristocracy in the North that had not yet found how it could itself profit from collaboration with the new merchant class. Some years later the true nature of this bourgeois revolution made itself apparent when it was possible to effect a compromise between the two exploiting classes by re-introducing a limited monarchy. The underlying class struggle still remained to be resolved. At the same time the struggle was by no means in vain. The fight against the restrictive power of the aristocrats with their feudal outlook on society meant the removal of definite obstacles to progressive advance. For the new situation opened up to the merchant the opportunity to use more easily and directly the labour and the creative skill of the craftsmen and the peasants for profit making. It meant, in a measure, a certain freeing of the worker from the bonds of serfdom in order that the new quality in labour might be used for the benefit of the merchant class. The detailed economics of this we shall see later. In the struggle for supremacy the fighting capacity and technical skill of these men were used to achieve victory. Then commenced the fuller and freer exploitation of human labour power through the general introduction of the wage system, the increasing efficiency of production, the creation of larger and larger fleets for the seeking and capture of new markets, and the struggles and wars with other states dominated by merchant policy. With the growth and develop-

ment of machinery and with factory system, the merchant class passes into the industrial capitalist class. The labour power of the worker can now be utilised for profitmaking to an enhanced degree. Unlike his father, the merchant prince, the industrial capitalist is now directly concerned with the actual production of commodities and with organising increases in their value. The merchant becomes an industrial capitalist just as soon as he begins to buy the labour power of the worker as he would any other commodity, at its market value, and directs it towards the production of commodities from the raw material. What the artisan previously did practically by himself, practically for himself, the industrial capitalist now organises on a mass scale. Everything so produced finally then passes through the medium of exchange before it is consumed.

Two opposites are brought into being by this forward drive, one within the working class and the other within the exploiting class itself. On the one hand a more and more sophisticated proletariat is formed; for the work of this period requires greater technical skill and greater scientic knowledge, inventive capacity and organisational ability. Not only does the demand for educational opportunities and political rights grow in volume, but working-class organisations spring up to improve wage rates and conditions of work, to protect freedom of combination and freedom of speech, to carry through trade union, co-operative and political activities, and generally to potect the working class against exploitation by the profit seeking class. All these can be seen as normal features of the incidence of the class struggle, and their very existence is in itself evidence to the outsider of the stark reality of that struggle. Industrial cities, smoke-laden, factory-laden, and slum-ridden, spring up in every capitalist country, and the class struggle is reflected in the poverty-stricken and degrading way of life of a large section of their working classes. Capitalism leaves its characteristic imprint on the exploited. A proletariat has been created. On the other hand the drive for new markets necessarily intensifies as an increasing volume of commodities pour from the machines. Colonial wars of conquest increase in frequency, and an Empire comes into being in which political control is centred in the home country and the home Government. The period of Imperialist Capitalism has set

in, the range and scope of working-class exploitation broadens out, the front of the class struggle has widened. The exploitation of labour at home extends to the exploitation of that of the subject races. Physical resistance and ideological opposition is aroused. This is naturally evidenced in the early stages by colonial wars and in the later stages by the growth of nationalist movements in the various parts of the empire, and in struggles for independence. Meanwhile the same forces that aroused within one capitalist group the need for imperialist expansion, begin also to have the same effect on other capitalist groups associated with other states. Hence the international framework of capitalism is now subject to internal stresses of rivalry that tend to tear it asunder. Two *imperialist opposites* are also at work.

Fincnce Capitalism. As individual industrialists owning and controlling and partaking in the organisation of their businesses, give way under the stress of competition to Trusts and Combines and Joint Stock Companies, *competition is itself negated* and capitalism begins to develop new qualities. The ownership becomes vested in impersonal bodies of shareholders, and the conduct of the business and administrative policy is passed on to paid executive officers. The personal link between owner and consumer is snapped. Thus the problem of financing industry becomes a separate or isolated aspect of the whole concern, and power passes into the hands of the financier. Companies whose sole purpose is to find finance, multiply in numbers and rise in power with international ramifications through banks and bankers. These, of course, march side by side with imperialist capitalism and are involved in all its contradictions.

Capitalism Moves to Fascist Forms

All sections of capitalism are driven forward with the need for expansion in an imperialist way. Where there is unevenness in developments, and a particular capitalist group is a late-comer in the field, its way is blocked by two factors. On the one side is the rising tide of revolt against exploitation, called forth among the workers as one of its opposites. In this it is the same as its rivals. On the other side stand other imperialist powers already monopolizing or seeking to monopolize the surface of the earth for their ends. The focus of

this group in Europe until recently was centred in Germany where, by deception, violence and brutality, it had succeeded in subjecting its whole people to its will. It has shut down on all the freedoms won by its workers, reduced them to machine slaves, confused their minds and their loyalties, and having debased them, organized them as soldiers in the most modern mechanized form. In this way it had fashioned a terrifying weapon in its struggle to find a way out against the two factors that block its path. On the one side it moved towards the enslavement of the remaining peoples of Europe, reducing their countries to the lowest level of exploited colonial areas, and converting the populations with their labour-power to direct instruments of its policy. Mobilizing the new resources so acquired, it turned to the attack on other imperialist powers in order to wrest from them the colonies and empires they already dominated. This was the first step towards world control.

In a purely mechanical sense, therefore, fascism is the highest mode of development of world capitalism, in which the power of the machine and the exploitation of labour are brought to a sharp climax. The history of the rise of the Nazi Party in Germany, the support given to it by financiers and industrialists, and the fulsome admiration and esteem in which it was held prior to the outbreak of the war by capitalist groups in other countries, including Britain, all point in the same direction. Capitalists everywhere looked with jealous eyes at the power-machine the Nazis built up along ruthlessly capitalist lines. The only fly in the ointment was the fact that in the final resort it has been directed towards the pursuit of a world monopoly-capitalism from which they were in danger of being excluded. For that reason, if for no other, they had to mobilise for the struggle against the final success of the very system they operate. But there are other reasons why they had to resisit. In Britain and America during the period of imperialist expansion, strong forms of democratic institutions have sprung into being that express a modern ethic to which the whole practice of Nazism does violence. The struggle against total fascism therefore has also an ideological content that gives fire and vigour to the fight. While therefore it is true to say that British and American imperialisms saw their deadliest enemy in Nazism, it is also true to say that the peoples saw this, but for another reason. In the light

of this, the closest possible economic and cultural co-operation with the Soviet Union can be made to play a profound role in fostering aspects of democracy that may revolutionise many of our problems of adjustment in the critical years to come.

But Nazism had yet another mortal enemy. In order that there may be no remnant of hope left among its world slaves, and no organised centre of resistance, it turned to a direct and frontal attack on the new Socialist State, for by its very success the first organised workers' state emerging in a capitalist environment cannot but undermine the power of the dominant class. If Nazism is the most naked form of capitalist rule in the modern world, its bitterest enemy must be Socialism.

Thus seen in the context of imperial rivalries, fascism is the opposite called forth in one imperilst group by other already successful imperialist groups. Seen in the context of the working-class struggle for emancipation, fascism and socialism stand as sharp opposites, the latter being called into being with increasing intensity, while the former, feeding on the life-blood of its enslaved workers, arms and strengthens itself with the help of its own imperialist rivals to wage the class struggle against them on a world scale. The greater the intensity with which the struggle is waged by Nazi Germany and other fascist satellites the more do they arouse and encourage their socialist opposites. The U.S.S.R. begins to tower over the other democratic States, moves to the forefront of the struggle on the battlefield, and becomes the determining factor in world political policy.

This struggle is total. There is no limit or extreme from which fascists will shrink. Every ethical quality that men have evolved in the past will be swept aside. Fascism will destroy and torture millions of human beings. It will resuscitate and flog up the basest passions if it serves a political purpose. It drags to the fore mediæval anti-Semitism to divert the attention of the masses from its crimes against themselves, and to destroy any unity there may be in the forces that uppose it. Finally, in cold blood, it wipes out the whole Jewish people that lies at its mercy, knowing that when these people are denied any future in a Nazi state they must become the agents of revolt. The bitter struggle in the Warsaw Ghetto bears this out. It obliterates and levels

modern cities and tramples on their cultural heritage. Rather than yield its power to a free working class it will turn the world into a shambles. So much for those who have maintained that the power of such a class can be quietly argued or cajoled away from them. To-day we witness the final stage in the objective struggle between these two opposites, bringing in its train a profound qualitative change in the whole world situation. It is indeed a situation fraught with revolutionary possibilities. But such a break with the past, revolutionary as it is, also occurs gradually. The beginning of this new order that represents a historic break with pre-history, came with the rise of the first workers' republic, the cornerstone of world socialism. Its deepest significance, as we can see, lies in the fact that the new phase of social change no longer represents a passage from one period of exploitation to another, but witnesses the *termination* of exploitation. For that reason there is no possibility of compromise between the class struggling for emancipation and any other class, although there may be between the contending capitalist groups. In the passage from feudalism to capitalism, compromise of this nature was possible, and, as we have seen, did in fact occur. It was possible because the feudal class and the bourgeois capitalist class had always before them the threat of the rise of the workers themselves. The passage to socialism therefore is itself a revolutionary break with previous revolutions, for the breach with previous forms of society becomes complete and final.

Socialism. The socialist movement is that historic opposite evoked among and on behalf of the working class by the successive forms of labour exploitation, particularly under capitalism. In Britain we find it in the form of the early Utopian Communism of Robert Owen, in the struggle of the Luddites, in the Chartist Movement, in the rise of Trade Unions and left political parties, and everywhere during the past twenty years in the growing strength and influence of each Communist Party. Each country has its own special history of working-class struggle, and its own growing consciousness of the meaning of that struggle. To-day a larger section of the population of every country understands the significance of past and present struggles in relation to this history, than at any previous period. This is in no small measure due to the tremendous revelation that has come from the power and

energy that the new Socialist Republic has mobilised in the present emergency. The new order, young as it is, has shown itself capable of tapping unexpected resources of mental and physical energy and of self-sacrifice, that completely outstrip the possibilities of the adjacent capitalist states.

In 1914 the Czarist autocracy of Russia existed as a weak capitalist power within the framework of western capitalist states. The following figures tell the story of class exploitation in that poverty-stricken land better than words can possibly describe them. They give the class structure of the population in 1913 side by side with the representation of these classes in the Duma—the Russian Parliament.

CLASS STRUCTURE IN 1913

Population	Percentage	Duma Representation
Individual Peasants ...	65.1	none
Workers	16.7	2.5
Kulaks	12.3	15.3
Landlords and Capitalists ...	3.6	82.2
Others	2.3	none

Here was a community comprising 82 per cent peasants and workers, controlled and ruled by a small class of less than 4 per cent landlords and capitalists.

We will not dwell over the long period of struggle and underground educational work carried through by the devoted bands of workers and intellectuals, the patient organisation and careful analysis of Marxist theory conducted among the workers and groups of peasants, nor on the years of exile and imprisonment suffered in Siberia by revolutionary workers. Nor will we treat the way in which the governing class and its decadent Church allies aroused racial hatred and instigated pogroms in their effort to divert the population from their own pressing problems. All the tricks of anti-minority feeling, strife and jealousies between national groups, all the steps to suppress and illegalise progressive activity that have been applied by the Nazis in Europe during the past 15 years, were part of the settled internal policy of the Czarist regime, that prison house of nations.

The Imperialist World War of 1941-18 was essentially a war in which capacity for technical production was one of

the most powerful factors for success. To place millions of unarmed men in the field to face modern weapons of destruction, was to send these men to their slaughter. Here then was Russia, largely a peasant country, with agriculture at an almost primitive stage, only slightly industrialized, at a weak stage of capitalist development, suddenly called on to face the might of a highly industrialized Germany. Such a strain its structure was not capable of withstanding. In such an emergency the workers and peasants were expected to provide with their unaided physical energy what was not capable of being supplied by the oppressive outmoded Czarist organization. Thus we see the incidence of the class struggle in these circumstances—not simply slow death and mental and moral deterioration in slums, but actual butchery on the battlefield, starvation and confusion at home. It is not difficult to appreciate the extent of the bitterness and disillusionment that was called forth against the effete ruling class and their supporters in Church and State and in public institutions. The apparatus of state cracked in the way our analysis leads us to expect. Fortunately Russia was not lacking in men and women who understood precisely the nature and meaning of the historic struggle that was now to be waged, in order that the workers and peasants might once for all free themselves from exploitation by any other class. The fruits of years of underground propaganda were at last to be reaped, and the tactics of the Bolsheviks in the face of the forces of reaction stand out as a splendid example of how history can be made when its significance is properly appreciated. This manifested itself first in the immediate task of sweeping away the Kerensky Government with its host of bourgeois and capitalist supporters, who hoped through it to retain their class position and their economic exploitation intact; and secondly in the tremendous struggle they carried through on many fronts against invading White armies and mercenaries, financed and supported by other capitalist governments. The successful completion of this task by a war-weary, famine-ridden and poverty-stricken population sustained and directed by the comparatively small group of understanding Communists, opened the way for the first time in history to the elimination of class conflict once and for all; and for the first leap forward of the common people into a new order of social living. A new qualitative stage had been reached in which

internal problems of utilizing past knowledge and technique, and making new advances in science and culture could be handled in a planned intelligent way.

The great advances that were achieved in industrial and technical training can be seen from the following table:

PERIOD 1926-1939

Manual Workers				*Increase*
Mechanics	...	...	...	3.7 times
Turners	...	...	...	6.8 ,,
Millwrights	...	...	...	13.0 ,,
Loco Drivers	...	...	...	4.4 ,,
Plasterers	...	...	...	7.0 ,,
Tractor Drivers	...	...	...	215.0 ,,
Intellectual Workers				
Engineers	...	...	...	7.7 ,,
Agronomists	...	...	...	5.0 ,,
Scientists	...	...	...	7.1 ,,
Teachers	...	...	...	3.5 ,,
Doctors	...	...	...	2.3 ,,

Henceforth advance could be made in all aspects of social living, not by the struggling opposites aroused by class conflict—a humanly wasteful method—but now that class conflict itself had been resolved, by those more rational contradictions thrown up during the planned administration of the natural and human resources of the community.

Freedom, as we have seen is meaningless without a full recognition of the limitations imposed in its exercise. In this case there was one over-riding factor that restricted the fullest development of the socialist state, and that therefore forced it to direct its efforts to meet it—the hostile environment of international capitalism. In the last resort this fundamental contradiction in western society was bound to reach its crisis, and the minds and activities of Marxists, organizers and thinkers alike, turned directly towards preparation for the greater struggle that was to emerge. The history of the recent war shows how ably and with what insight Lenin, Stalin and other Soviet leaders of political and military thought, social administration, industrial planning, education, national questions, science, technology, art, have handled this issue. These were the tasks of the new society, suddenly produced as by

an explosive force within capitalism, and these were the preparations made to face the struggles when they would emerge into the open. History has itself made clear to all who can see and understand, the tremendous possibilities that open up to the whole people once an outworn capitalism begins to disintegrate.

Just as the historic function of feudalism was fulfilled by ushering in the capitalist era, so the historic function of capitalism has been that of paving the way for the coming of Socialism and Communism. As that function approaches fulfilment society is confronted with contradictions that cannot be resolved on a capitalist basis and which are therefore driven steadily deeper and deeper.

What has it achieved of a positive nature?

It has created a working class of a technically advanced character. The sons and daughters of this class design and produce the most modern and scientific machinery; they organise complex processes of distribution. They are experienced administrators and planners. They include professional scientists and technicians capable of utilising the natural resources of the world, including the colossal reserves of atomic energy, in such a way as to usher in a world of plenty. The developing needs of capitalism have called into being the material means for the creation of a Communist society.

There is no evidence from history to justify the belief that a governing and controlling class will calmly and willingly hand over its power to another class merely because the latter is socially and historically ready to take over the reins. Such a governing class inevitably believes that by carrying through the functions of capitalism on an ever more efficient basis the difficulties it encounters are certain to be transient and temporary. In that way it drives its contradictions deeper and deeper. The world war which has just been completed has left the fruits of victory very definitely in the hands of American capitalism. Industrial production in that country has been stepped up to a level that has never previously been surpassed in any country. Financially she dominates the capitalist world. With the almost unlimited possibilities opened up by the use of atomic power in the compara-

tively near future, it is reasonable to contemplate a steep rise in the output of manufactured commodities, and therefore a corresponding drive for the capture of external markets. The stage is set for a desperate struggle for world markets—in China, Siam, India, South America, the devastated countries of Europe and even within the British Empire. At this new level of capitalist production, the United States of America races along the path of Imperialist expansion that was trodden in more leisurely fashion by the British Empire in the 18th and 19th centuries after the first Industrial Revolution. And as if to parallel that process in finer detail, she is rapidly laying claim to strategic points in the Pacific and elsewhere should she find herself driven to supplement her economic drive by atomic war. But if the advantages of Imperialism are to be won at this accelerated pace, so also must the difficulties mount up with ever increasing intensity. The aftermath of British Imperialist expansion in the 18th and 19th centuries was the succesive economic crises of booms and slumps of the 20th century, with its over-stocked warehouses and its underconsumption, its crises of unemployment and the growing militancy of its working class. There is no reason to suppose that a new great Imperialist power like the United States sowing its seeds in precisely the same way will not also reap the whirlwind, for there is no evidence to show that the underlying motivation of this process is different at all, except in degree, from what has gone before. The wheels of history are no longer grinding slowly.

We have devoted more space to capitalism and to socialism, that dramatic break-away from previous societies, than to feudalism mainly because they are closer to us. and an understanding of their growth and structure in detail is more essential to us in deciding on any course of action. Nevertheless, within all three the creation of opposites, the arousing of contradictions and the transformation of quantity into quality manifest themselves at every turn.

CHAPTER TWELVE

MISCELLANEOUS QUESTIONS AND ANSWERS

II.

1. *Is Soviet Russia a Communist or a Socialist State?*

What is the difference between Communism and Socialism?

When the workers seized power in Russia famine conditions existed in that country. Three years of intense warfare broke the back of the Czarist regime. Four years of revolutionary struggle to drive out the invading armies of the White Russians and their capitalist allies reduced the productivity of the country to starvation point.

The first problem that faced the Communist Party was to set going the wheels of production in order to break away from the famine dangers that beset them. The first step, therefore. was the encouragement of State-owned enterprise side by side with the encouragement of certain forms of capitalist enterprise where these could not yet the undertaken by the workers' state itself, for obvious reasons. In this period it was imperative, however, that in the last resort full power must remain in the hands of the workers in order that such capitalist ventures could be kept within necessary social and economic bounds.

The second step was the rapid development of socialist production by means of State and Collective farms, co-operatives and other workers' controlled organisations. It is the stage that witnessed the first great release of the energies of the people towards raising the social and productive level of the community, and for the preparation of the defensive measures against capitalist aggression. In this period the wages system is still retained. "From each according to his ability, to each according to his work" is the phrase that describes the situation most concisely; but it is vitally important to recognise that this period marks two important features.

First, it marks the growing experience of the workers' organisations in coping with the social and economic problems of their new community, and on the other hand it marks an ascending tempo of productive energy, a growth of political

understanding on the part of the masses, and a unity of the Soviet people's struggle towards a common objective. The diverse nationalities of the Soviet Union with their various languages and literatures, and their diverse cultures, are discovering ways and means of developing their powers and their initiative so that their contribution towards the common welfare rises in ascending tempo. This is the period of Socialist Workers' Control, when the means for an age of plenty are being fashioned.

When the recent war of liberation broke out, the third stage was literally on the threshold. This is in itself evident from the tremendous capacities shown by the Soviet peoples in their struggle. With the outpouring of all manner of commodities, with an almost unrestricted capacity to create every and any article required to satisfy the growing needs of the people, we begin to enter the period of Communism. This is summed up in the phrase—"from each according to his ability, to each according to his needs." With this passes the old wage system, and there arises a community in which the whole energies of the people are mobilised towards a common purpose—the fullest satisfaction of the physical needs of the whole population, and the release of their surplus time and energy for the cultivation of aesthetic enjoyments in science, art, literature, music and philosophy.

The U.S.S.R. had all but fashioned the weapons for the introduction of Communism when the Nazi onslaught took place. The experience of the war, while it will accentuate certain contradictions of capitalism to even more acute forms, will have enriched the Soviet peoples in spite of their tremendous losses, so that now the war is over they will build up even greater capacities for productive organisation than they possessed before the dastardly attack of the Fascists. The lessons of war will have assisted in the solution of the problems of peace. But the material damage that has been inflicted still must be stupendous. With the end of the struggle the Soviet state, in a very restrited sense, has returned to a stage similar to that in which it found itself at the end of the wars of intervention. In a very startling sense it returns at a totally new level with qualities of internal unity, capacity for organization and powers for utilizing its modern scientific and technical knowledge multiplied a thousand-fold.

2. *Is Marxism an Economic Interpretation of History?*

It is frequently asserted that Marxism preaches an economic interpretation of history. This is grotesque, but it is repeated *ad nauseam*. The view that Marxism is concerned only with the economic and productive forces to the exclusion of the ideas, desires and cultural needs of the people, in any society, is a travesty of the truth. It has been much ventilated by those who have never taken the trouble to read about Marxism or to discover at first hand what it teaches. In this book we have endeavoured to show how the Marxist recognizes three factors, at least, as being significant in any social situation: (1) The means of production and the means whereby the products are shared; (2) the outlook or ideology of the society in which this occurs, including its artistic and scientific and literary expression; (3) the institutions, educational and governmental, which are set up to give concrete shape to this ideology. We have seen that there are circumstances in which any or all of these factors become important. But it has also become clear that the form of the ideology and the nature of the institutions erected in any society are powerfully conditioned by the first, namely, the productive forces and the way in which they are organised. That is what we have meant when we have stated that the social and cultural level of a society rises or falls with its productive forces. The Marxist, therefore, asserts that a scientific ana-study of the productive forces and productive relations. This is only the first step, but it is an important one for it immediately enables us to obtain a picture of the class forces that come into play and the institutions through which those express themselves. It should proceed to discover at what stage in the development of the productive forces the ideas and emotions of the people are so aroused, in spite of established institutions, that they are moved to action. This, the Marxist asserts, necessarily occurs also at a time when great difficulties are being encountered in the operation of these productive forces. In fact, at a time of great change, all three factors referred to are involved in the social process, but basically the social structure is shifting because of the critical economic strains and stresses of society. To say, therefore, that Marxists attempt to explain the course of history by expressing everything in terms of economic causes and economic motives

is either to show a profound ignorance of Marxism or deliberately to falsify its teachings. Above all the Marxist does *not* assert that the motives and actions of the individual are dictated by mere economic self-interest. At the level of economic forces the Marxist is concerned with social not personal changes. Individuals who, at great self-sacrifice, work for the removal of injustice and the end of human exploitation, do so because they work at a level at which the power of ideas and feelings is much more cogent than self-interest in the economic sense.

3. *Do Marxists Maintain that the Individual plays no Part in History?*

Marxists deny that this is true about their attitude. Without individuals there would, of course, be no history. What they deny is that history is simply the outcome of the *free* activities of certain great individuals, or that history is to be analysed in terms of the actions and intentions of individuals.

No two persons are alike in all respects. They differ in brain capacity, in sensibility, in emotional expression, in mental and physical strength. In a multitude of other respects they are the same, no matter how gifted some of them may be. But they are not isolated creatures who do what they want without limitation. They handle the problems of their day as they encounter them, with the material at their disposal. These problems and that material are both thrown up socially. Individuals inherit them, and make their changes in them.

While, therefore, we can say that men make history in solving the problems with which they are faced, and with the material handed down to them, we can also say that *history is made with the individuals society has at its disposal*, and this is particularly apparent at the crucial moments when fundamental decisions have to be taken, and when changes occur with dramatic suddenness.

Those gifted men who are unlucky enough not to be on the historical spot, in circumstances where their gifts may be fully applied, pass unnoticed across the pages of their times. Those gifted men, who are fortunately situated in time and place, and to whom therefore the opportunity is presented, are able to exert their energies and to help shape history in

the way it should go. Even second-rate men, have been caught up in the stream of history and made to play outstanding roles; but because they are less gifted they will play it with less understanding.

To isolate the action of the individual, however powerful his intellectual equipment, from the problems of his day, and to suppose that these problems would not have been solved without an individual as gifted as this or that geat figure, is to take an unbalanced and unscientific view of the growth and development of social forms.

Newton, great as was his capacity, could not solve the problems of a Clerk Maxwell or an Einstein, two, and two and a half centuries later. He could not even imagine them. He was a creature of his time who wrestled successfully with the scientific problems of the seventeenth century. That was equally true of Marx and of Lenin. To-day Stalin and his colleagues, in their setting, face different tasks of the greatest moment. These are the crucial problems of present-day society. But in a socialist society where the full energies of the people are encouraged and called forth, many stand around him capable and willing to shoulder the tasks that history has thrown up at this critical juncture. Those who imagine that history is made by specially gifted individuals are merely those who have brought to bear on this problem an outlook that is rooted in the individualist period through which we have all but passed, thinking always in terms of eminence, greatness, and so on, while forgetting the great and magnificent contributions made by the unknown masses in the background. Where would the western world be to-day without the stout and heroic defenders of Leningrad, Moscow, Odessa, Sevastopol and Stalingrad? These are the unknown geniuses who have made an immeasurable contribution to history beside which the actions of a Pitt or a Nelson pale into insignificance. These heroes have been created by a socialist society.

4. *Do Marxists Maintain that the Most Advanced Capitalism Will Break First?*

Certainly not. A chain breaks at its weakest link, and which is the weakest link will depend on the nature of the stress to which the chain is subjected. Among all the Euro-

pean countries involved in the war of 1914-18 Russia was the least developed in a capitalist sense. That was, however, a struggle whose origin was imperialist but in which, as in the present war, the resources of industry in its most modern form were called into being. The struggle exerted a tremendous strain on the industrial organisation of each of the combatant countries. Here was Russia, a large Empire with the weakest industrial development. This showed itself in the lack of equipment in the field to meet the artillery, gunfire and aeroplanes of Germany. Mere flesh and blood is impotent in itself against steel and shells; and the Czarist autocracy collapsed.

But this collapse came not merely because of weak Russian capitalism. The collapse was not simply industrial and military, but also social. The feudal structure of pre-Soviet Russia was already historically outdated, and only by drastic repression of all progressive activity among the Russian peoples had it been possible to maintain Czarism. Class cleavage was sharp and distinct. The Court was depraved, the upper class cosmopolitan in a degenerate sense. It had nothing in common with the millions of poor peasants and near-serfs, hardly even their language. In a real sense the Russian peoples were under foreign domination. But a knowledge of Marxism had spread, and underground organisation was highly developed. Here was indeed fertile soil for revolutionary propaganda and press work. In this, the more enlightened and daring workers, and the progressive elements among the students, played an outstanding role. When therefore the military collapse occurred, it provided precisely the occasion for a social upsurge, armed as the masses were, and for the direction of this new energy into revolutionary channels. At one and the same time there co-existed a mass fervour for freedom and bold, intelligent Marxist leadership.

To assert therefore that the most advanced Capitalism will break first would be to take a very naive approach to Marxism. Indeed it is clear that in the post-war world the centres of the two most advanced Capitalisms will be the U.S.A. and Great Britain. The wholesale bombing of German industry and her military defeat has eliminated her for years as a serious competitor. The same is true of Japan. These surviving Capitalisms, however, require above all, externaly markets.

While the war has stepped up the productive capacities of both countries it has created devastation throughout Europe. It has also pressed forward the industrial development of semi-feudal countries in the East and the Near East, and both these throw open the possibility of vast new markets. Should it be possible for the capitalist groups of Britain and the U.S.A. to share these world markets in some non-competitive way, so that the tremendous resources of Western Capitalism can be mobilised for a period in reconstruction, we may witness a new level of capitalist growth of a progressive nature for some considerable time until the internal contradictions of its mode of production again become accentuated on a vast scale. On the other hand, failing such an agreement on markets, the stage will be set for the familiar imperialist struggle, leading again to war and to world revolution.

While therefore the Marxist holds that all Capitalisms ultimately outdate themselves, paving the way towards Socialism, it is by no means the case that the most advanced Capitalism must break first.

5. *Does Marxism Ignore the Existence of the Middle Class?*

It is sometimes asserted that Marx writing in the middle of the nineteenth century saw the growth of the industrial revolution in too simple a form, believing, it is said, that the class division of society into two sharply defined sections was imminent; the revolution was at hand. That this is a travesty of Marx need not concern us. His writings refute the charge. What is important to recognise, however, is the stupidity of the implied charge. Shall we dismiss Newton from his place in the history of science because he remained ignorant of the possibilities of the electro-magnetism and motor generators, of relativity and quantum theory? And so, in the same way, the basic analysis developed by Marx in his day, with the material at his disposal, has provided the means for the later work of theoretical and practical masters like Lenin and Stalin. Changed conditions have produced new methods of dealing with new problems, but the Marxist theory of change still underlies these.

What seems to give point to the criticism is what is referred to as the rise of the Middle Classes. It is perhaps true

to say that while Marx saw clearer than any writer in his day, and clearer than many even to-day, the tremendous effects that were to be produced by the coming of science and technology into industry, he did not envisage such a large growth of executive and administrative officers who would be employed as wage earners to carry through the administrative work of capitalism. But the presence of this body does not constitute a new class. The middle class is not a new economic class, but a section of workers with a specialised function. They do not own industry, and any control they may appear to exercise is more apparent than real. They are generalised foremen acting as a cushion in the class struggle during times of well-being, and thrown on the crapheap like the unemployed during times of depression. This is to-day becoming all too apparent when, with the rise in the cost of living, with inceasing taxation, both direct and indirect, the recognised advantages in status and social well-being that have in the past century been accorded to this section of workers are being rapidly whittled away. The essence of capitalism lies in the fact that values are filched not by purchasing them but by hiring the workers' power to create values, and this applies to all engaged in production, whatever the status accorded to them. In itself this implies a fundamental economic division in society, whatever the manner in which it may be masked by varying the status of one section of workers or another. As long as production is conducted on this basis, and as long as the operation of production depends on the existence of profitable markets for the surplus value that arises out of this labour power, so long will the contradictions in capitalism remain. All that happens as a result of the growth in numbers of this executive class is that these contradictions manifest themselves in a special way in that section of the community. Today, in the light of the knowledge and understanding of how the Soviet Union has solved its production problems, and tested that solution in the furnace of war, even that section, with its ideological affiliations and hopes of being associated in status with the owning class, has begun to understand the true significance of the class structure of society.

At the same time we will make a very grave mistake if we underestimate or misjudge the special forms of strength that the middle class may exercise. On the one hand it is

a wage-earning class with the potentialities in action of such a class, for it does in fact perform a very significant function in capitalist organisation. On the other hand this does not yet express itself in full ideological form, for the reasons we have stated; but professional organisation is rapidly spreading among them, especially in that vital and expanding section, the technical and scientific groups. Since capitalism, to survive to-day, must show itself more and more efficient, these men and women, while they may not have their hand on the steering wheel, do in fact control the engine. They have come to occupy a key position, but the key may be turned by others to switch their energies for or against progressive change.

Either socialism or fascism may be developed in the most efficient and scientific way. The consequences may mean Heaven or Hell for the citizen. The geatest weakness in the Russian Revolution that hampered its full development lay in the very feature that was primarily responsible for the immediate collapse of the Czarist regime, the low level of scientific and technical achievement that reflected the weak state of Czarist industry, when contrasted with that of its nearest capitalist neighbour. Moreover the ideological outlook of such technical and scientific men as did exist threw them on to the side of reaction, with a few notable exceptions, so that their services were denied to the young Soviet State just at the moment when they would have been most valuable.

Here in the west we are more fortunate. Capitalist industry has reached its highest point of development. The working class possesses therefore a large body of highly skilled mechanics. Indeed the needs of the war situation threw a large mass of young men and women into the technical services of the armed forces, and into the factories, performing the most skilled jobs, steadily improving their technical skill and their specialised knowledge. Industry itself is highly rationalised and there is a considerable body of men and women capable of organising production at the most modern level. Even the farm worker, traditionally considered to be backward in comparison with his fellow worker in the urban areas, now easily handles tractors, reapers, and binders, of a most elaborate type. Farming is rapidly becoming a mechanised industry. Tens of thousands of research workers are daily

becoming more and more conscious of their economic affiliations, in spite of the social contradictions to which they are exposed as members of the middle class. They are a thoughtful and highly intelligent type. To suppose, however, that these people will necessarily align themselves with the working class by sheer economic pressure, without careful nursing, would be the height of stupidity, for Nazi Germany has proved how easily the middle class can be mobilised in support of reaction at a critical moment of social history. One of the crucial questions that faces the working class is—can it succeed in winning the sympathy, understanding and active assistance of the middle class?

6. *Has Marxism no Ethical Basis?*

It is said that Marxists are concerned only with expediency and not with right and wrong, and that the latter never enter into their calculations. That this must be false is evident to anyone who sees with what vigour and self-sacrifice Marxists throw themselves into the struggle to right social injustice. It follows that the charge really amounts to this, that Marxists are unconscious of the ethical content of their own actions. The charge, therefore, appears to be one of ignorance, rather than of lack of moral sense, and it amounts to the assertion that non-Marxists who make the charge understand more about Marxism than Marxists. Yet the argument. as is well known is always put forward in order to accuse the Marxists of having an a-moral or non-moral attitude. Whatever the truth of the assertion that Marxism provides no place for ethical judgments, it is therefore a deceitful complaint. Let us examine that charge itself, not because it is a charge but in order to understand Marxism

As we have seen, all forms of change have a material or physical basis, however abstract the phraseology in which they may be stated. The motive force of social change lies in the contradiction between the way men have produced the material things that make life and society possible, and the way the outcome of this social labour has been distributed. In this lies the conflict between the social character of production on the one hand and private profit on the other. This is basic to the Marxist analysis. On a grand historic scale represents the continuous struggle between *productive content and social form.*

It is in this setting, in a real human sense that we have to read the meaning of the ideas and moral principles that men have expressed from time to time, for these do not exist as independent thoughts and judgments, but are directly connected with, and react back on the activities of men in society. In the detailed social struggle that men conduct, they continually judge and value, feel indignant, righteous, unrighteous, outraged, just, moral . . . but in all cases their judgments and valuations refer to very real physical and material circumstances and actions, that occur around them. A material and physical conflict expresses itself also in a moral or ethical conflict. Thus, just as there is a history of social struggle, so there is a history of ideas and judgments related to it. It becomes possible and necessary, therefore, to study the historical development of moral standards and judgments on the social plane, to note their form and content, the contradictions that arise between this moral theory and actual social practice, and the qualitative changes through which both pass in this interaction.

Cannibalism, slavery, polygamy, human sacrifice, child slavery, serfdom, theft, usury, murder, war . . . have all in their time been approved and condemned; approved when they coincided with the interest of maintaining the system in which they were practised, condemned when that system had so outstayed its time, that these practices had become a hindrance to development.

A few illustrations will suffice, but every study of anthropology, raging from the study of tribal customs to those of modern society, has brought out the same point. Today war has become so drastic, destructive, and universal, as to threaten the stability of society itself. Its condemnation is therefore deep and universal. The numerous colonial wars of the 19th century in which this country was engaged did not evoke the same wholehearted condemnation. We conducted wars in Burma, China, India, Egypt and the Sudan, the Crimea, South Africa, etc., and in all cases we accepted, tolerated, or justified them. Today when the cities of Europe are being levelled to the ground, and vast populations are being destroyed or driven into fascist slavery, moral indignation reaches new heights, and we feel that at last something must be done to resolve the contradiction between our theoretical moral outlook and the actual physical chaos that sur-

rounds us. Those who pretend to have a clearly defined moral code that tells them exactly what has to be done in all circumstances will no doubt find an easy solution! And these are the people who complain that Marxists have no ethical basis on which to ground their judgments and valuations. The Marxist is entitled to point out that war, having become a hindrance to social development, may now be expected to receive wholesale condemnation, unlike the situation when colonial wars played a significant role in the expansion and development of imperialist capitalism. But the Marxist also points out that mere moral exhortation is not enough. Actual physical and material steps have to be taken to change the situation so that wars cannot arise. Theory and practice must be united on the same plane. Universal war cannot be resolved by preaching to individuals.

Let us examine some earlier illustrations. The church of the feudal system was the moral centre of gravity of a society that was almost self-sufficing. Unable to look forward to the changes it would be itself compelled to initiate, it did not realise the role of the marchant class. Thus usury, that succeeded in acquiring for the merchant a share in the product of human labour other than by the ordinary forms of feudal serfdom, was condemned outright by the Catholic Church of the period. As the merchant class grew in strength, so it increased the strength of its challenge to feudal restrictions that hampered its development. The Protestant Church rose therefore as the moral centre of gravity of the merchant class in opposition to the Catholic Church. Merchant Capitalism needed usury—hence the modified moral dictum that a not too excessive usury was justified. A Marxist today, understanding the role of interest and capital under mechant capitalism, and of dividends under industrial and finance capitalism, and looking forward in history to a society in which the exploitation of human labour shall have ceased, is able to condemn out of hand all such forms of theft. In this sense, his etheical standard, reflecting a later stage of social development, is higher than that of those who would charge him with having no ethical basis for his judgments.

We can see the same process at work in regard to the issue of slavery. We read of the indignation voiced by some sections in this country—not all sections by any means—against the slave trade of the southern states of America, just

at the time when workers were suffering the cruellest hardships in the mines and factories of this country. Some who were foremost in their agitation for the elimination of the slave trade also obstructed any attempts to remedy exploitation at home. They were genuine in their inconsistent attitude, but there were economic reasons for both attitudes; just as there were economic reasons for the conduct of the slave trade by the cotton planters of the southern states. The attack and the defence were fought out on the moral plane. The Marxist, recognising this connection between ethical judgments and their material basis, does not thereby relinquish his moral indignation. On the contrary, deepened as it is by his understanding of history, he presses forward for the changes that will eliminate these injustices, knowing that in so doing he is helping to force the situation forward to a society in which class exploitation will have become a thing of the past. What he denies is that there is any basis whatsoever for maintaining abstract, unchanging ethical principles that have a universal validity unconditioned by the social situation in which they have to be applied. And in denying this, he protests also that the validity of these judgments cannot be gauged in abstract discussion, but only in the realm of actual social practice. Out of the experience of social practice, out of the closest study of past history only, can there emerge ethical ideas that have factual meaning to those who have to practise them. So long as society is class divided, so long will this social contradiction be reflected in an ethic whose theory will contradict its practice. This has been the case with Christian ethics which have been preached for nearly 2,000 years without any very obvious fundamental changes having been produced in relation to the problems that arouse our moral indignation. Indeed, the history of Christian ethics, and of all other similar ethics, is the story of the continual adaption in practice of a set of so-called beliefs that are maintained unchanged in theory. During the war when wholesale destruction of human life was the order of the day, and human suffering and deepest torture became a commonplace, the fundamental contradiction between such abstract ethical principles and the world of physical reality was so apparent, that only its most superficial exponents refrained from silence and dismay. Every moral teacher worth his salt knows in his heart of hearts that all the ethical systems of the past have bankrupt-

ed themselves in the present. There is hardly a single precept of the great moral preachers of the past that does not stand out as inept and inapplicable. To the Marxist the reason is self-evident. All of them have attempted to formulate general and universal judgments and principles of conduct of an individual or personal nature, independent of time and place. With the voice of a particular social period they have attempted to speak for all periods. They have ignored, or been ignorant of, the changing forms of social life, the way in which this expresses itself through the individual, and the way in which the individual will express himself through them. They have in fact not understood history, that it is by the actions of all individuals to whom such preachers have endeavoured to give guidance that history is in fact made. It is evident to the Marxist therefore that, however keen and searching the formulation at any one stage, a time must come when the social backgorund will have so altered as to make its application impossible. Indeed, such principles as "turning the other cheek" and "loving your neighbour as yourself" are to-day completely negated in world war. Those who preach them deny their validity in practice. The history of moral persuasion during the past two thousand years bears this out. While the Marxist therefore is as much concerned as anyone else with justice and injustice, right and wrong, he sees these always in a historical and social setting, and insists on reading their meaning in relation to actual practice.

If, then, there is this continual relation between ethical judgments and productive and social relations, it may be asked, how is it that Christianity preaches principles that are recognised as being far in advance of their day? For after all there are many honest Christians who give a whole-hearted support to the Soviet Union precisely because they regard the social system that is there being set up, as providing the possibility for realising the teachings of Jesus. How is it they seem to recognise in the present early stages of the U.S.S.R. the actual practical manifestation of Christian principles, the abolition of the exploitation of man by man, the care and consideration for the treatment and tender feelings of young people and little children, the special care for the weak, the aged, and the infirm, the equality of man with man, and man with woman, and the encouragement of backward peoples? The reason is not far to seek.

Early Christianity was a beakaway from local and tribal religion. It represented the growth of one of the *universal* religions that drew its inspiration in that respect from the universality of the Empire within which it grew up. The early Christians preached a gospel of brotherly love, of a heaven in which all the miserable, sinning slaves would be free, a happy contented flock under the especial protection of a God of Love. It was a form of Christian Communism of a primitive sort, rationalised in thier minds, and conceived as an escape from their earthly sufferings. It was necessaily only a psychological and emotional escape, for it was formulated at a time when the particular form of slavery had not developed sufficient power to secure its overthrow. Moreover, the economic basis of society at that time was not such as to make Communism either a natural outcome of social change at that stage, or even a possibility. It remained, therefore, in the realm of ideas, an expression of a primitive longing, very much in the same way as the age-long yearning of the Jews for a return to Palestine has haunted them for the same period. Today society has made a complete turn of the spiral, and a socialist society in a modern setting has begun to take shape before the eyes of Christians. Thus tenets of primitive communism that have remained with them throughout these many years, transformed and adapted by themselves in the light of 20 centuries of inapplicability, at last show sings of realisation. It has been these forward-moving Christians who have been among the first to hold out the hand of friendship and of brotherhood to the Soviet Union, and to hail it as the material embodiment of what they have themselves been preaching as an ideal.

7. *If a Classless Society is Inevitable, Why Do Anything?*

A classless society is inevitable only in the sense that it is humanly certain that you will do something about it.

What we have been studying has been the struggle between social forms and social content. That struggle has not been abstract, merely ideas and images existing in the human mind, but actual efforts conducted by actual human beings to extricate themselves from their difficulties. The question, therefore, is simple—are there difficulties, are there

going to be difficulties, are they going to affect you, and are you likely to take action—any action—to ease your situation once you find these difficulties affect you?

Dramatic changes are usually made during times of social stress. Its oncoming may be slow, but its climax may occur suddenly. Since it is social stress, there is no one who can be properly immune from it, whether it be of a military nature as in the midst of a war, whether it be the later consequences of military action, whether it be shortage of food, or a question of civil rights and freedoms. To imagine, therefore, that it will be possible to sit down and look on while the pages of history are turned by some mysterious unseen hand is to be guilty of a lack of realism. Every person in such a situation does something, whether it be sensible and enlightened with a clear appreciation of the meaning of his actions historically, or merely stupid because the individual is merely squirming to survive in a situation he does not understand. He may, of course, be fully understanding, and hating the picture of what will finally emerge, struggle to postpone it as long as possible. But such attempts merely accentuate the contradictions in the situation, and lead ultimately to the same conclusion but under conditions of deeper distress and difficulties. It is in this sense that a classess society is inevitable. There is no such thing as stepping outside the panorama that is now being unfolded.

Exercises

The following exercises are really intended either as themes for general discussion, or for special essays. It is not suggested that the material required for their answers will be found in this book, although the underlying principles will be found here. For the period of 17th Century change, in this country, an excellent treatment will be found in "The English Revolution, 1640," by Christopher Hill (Marxist Text Book Series No. 4).

1. The church of the feudal period was catholic, that of the mercantile period, protestant. Explain the meaning of this in the ideological struggle of these periods.
2. Explain in what sense the rise of the merchant class can be regarded as an opposite to the already existing feudal class. How did the internal contradictions so aroused showed themselves in the realms of production, government, ideology?
3. The New Model Army under Cromwell, with an efficient commissionariat and technical staff decisively routed the

Royalists. Discuss this statement in the light of the assertion that a decadent dominant class is unable to utilise fully the means of warfare that have been developed during its own period of power.

4. To the bourgeoisie who fought against Charles I for freedom and equality, these two words meant freedom to produce and sell commodities to their own advantage without being restricted by feudal restraints, and equality meant the unrestricted entry of every bourgeois to exploit a growing competitive market. Comment on this, and contrast these conceptions of freedom and equality with those that have emerged at this period of history.
5. "You have no other way to deal with those men, than to break them or they will break you," declared Cromwell of the Levellers. Discuss this in the light of the possibility of compromise between the capitalist and the working class.
6. The capitalist class had no sooner extricated itself from the power of the landed nobles, says Engels, than it was dogged by the shadow of the wage-earning class. Discuss this.
7. Why are so many laws concerned with the rights of private property?
8. "Competition is essential to efficient trade." What was the nature of the opposite called into being by competition, and in what way was the latter negated?
9. Discuss the special qualities of multiple stores that distinguish them from a large number of small shops.
10. Compare the qualities of collective bargaining with those of individual bargaining for wage rates.
11. How did individualist production reflect itself in the popular ideology of its period—in ambitions, in personal relations, etc?
12. "Capitalism depends for its success on scarcity." "The historic function of capitalism was to introduce the era of large-scale production." Compare and contrast these two statements.
13. Classify the wars of the past and of the present, under the following headings, justifying the classification:
    (a) Feudal wars for the unification of feudal control;
    (b) Merchant capitalist wars to liberate the merchant class from the fetters of feudal control;
    (c) Rival merchant capitalist wars;
    (d) Colonial wars and wars for national freedom among colonial peoples;
    (e) Revolutionary wars;
    (f) Imperialist wars;
    (g) Wars of Liberation.
14. Mention any individuals in history who recognised the contradictions of their time, and assisted in their resolution.
15. "The working class is not fit to govern," was a political slogan some years ago. Indicate at what stages in social change the dominant class shows its inability to govern.
16. "The modern state is but an executive committee for administering the affairs of the whole capitalist class" (The

Communist Manifesto). Explain how this statement of Marx and Engels in 1884 is brone out by the German Nazi State of 1933-44.

17. Discuss the futility of political assassination in the light of the role of the individual in the making of history. Are there circumstances, for example, associated with guerilla warfare, in which this is not true?
18. Discuss the original and role of political parties in a class-divided society. What does this imply for a classless society?
19. Distinguish between State "Socialism" in which the structure of society is capitalist, and socialism in a workers' state. Illustrate by contrasting the German Nazi State and the Soviet State.
20. It is sometimes argued that since class conflict is resolved in the U.S.S.R., the drive for change must also be absent. Comment on this. In particular explain why the Stakhanovite Movement did not arouse the same contradictions as did the introduction of Rationalisation under capitalism.
21. Show how the successive Five Year Plans were steps in the dialectical development of Soviet industry and social life, showing how each stage aroused the problems for the next, and provided the means for their solution.
22. Examine what evidence there is to show that the Soviet Government early appreciated the dialectical interconnection between Industry and War, and what steps they took to preserve and adapt certain qualities of the former, when being transformed by the latter.
23. Discuss how the tactics and strategy of the actual fighting on the Eastern front during the recent war exemplify dialectical principles.

CHAPTER THIRTEEN

THE DIALECTICS OF SCIENTIFIC METHOD

A Study in the Breakdown of Categories

Every method of approach to the study of nature that can show some measure of success in the practical sphere tells us something of the world in which we live. No method of approach can tell us everything. The danger lies in exaggerating or in underestimating what has been and can be done by any particular form of approach. This limitation to success is necessarily so in an inter-related world, for only a part or aspect of the universe can be considered or embraced within any scheme. It follows that the scientific approach has to be adjusted to a contradictory situation. On the one hand it has to assume as a working principle that there is nothing

that need fall outside its purview, while on the other hand it has to recognise that at any moment all it can treat is a slice or section of reality. The contradiction is resolved in practice by the recognition of the limitations of science at any given moment in its history, and by pushing forward with scientific advance for the purpose of overcoming these limitations. The scientist is perpetually faced with the two-fold task of sharply defining the restricted field in which his generalisations are valid, and with devising ways and means of breaking beyond these fields by extending his own method of approach. As scientific knowledge advances, so also does scientific method; indeed a clear appreciation of scientific method is itself also a fundamental piece of scientific knowledge.

In an earlier chapter we have dealt with the meaning of a definition. At this stage we turn therefore to something very similar—the meaning of a theory, which as we shall see differs from a definition mainly in that it is a much more organised set of ideas with which we are concerned. A theory in this sense plays a special part in thought and action.

What is a Theory?

A theory is a statement put forward in such a form as to help in analysing a situation, and so providing a guide to understanding and a pointer to action. In making such an analysis, the theorist picks out or isolates or abstracts what seem to be the most important or most significant features of a situation, and links them together in a sensible or logical way. This means that the theorist ignores what are to him the irrelevant matters. A theory is to that extent an isolate, or an abstraction of the actual situation. It is like a very elaborate definition of a process. Moreover, just as a definition always describes one aspect of a thing in terms of something else already known, so also a theory does not stand by itself. It is also distilled from past experience already accepted. It is this knowledge that enables the theorist to suggest that certain aspects of the situation are significant and others of no importance. Theory consequently grows out of practice, bringing the latter sharply to a focus. It is a step towards a deeper understanding. Practice then in its turn emerges out of theory, and out of this dialectical interplay between theory and practice, science is made. There are, therefore,

old discarded scientific ideas that have outlived their day. They have served their purpose of helping us to throw off the restrictions of earlier practice by suggesting a new field of experience. The new ideas and new theories that emanate from this, set new tasks to scientific men, and when these are formulated and carried through, they negate the old theories that gave them birth.

A Theory is True and False

Because a theory necessarily ignores various aspects of a situation, that theoy is to that extent deficient or false. It was the same with definitions. On the other hand these features that have been isolated, in thought, are actually present in the physical situation, and to that extent the theory is true. Thus the test of the goodness of a scientific theory is essentially a practical one. Prior to that the justification of its being accepted, even for testing, is that it is not logically inconsistent and that it embodies past experience.

Purity and Impurity

A good scientific theory then is both true and false. We have always to ask: "In what situation is it true?" and "In what situation is it false?" Common salt, for example, is considered to be a compound of the metal sodium and the gas chlorine. This is a theory, and a very good theory indeed, as a wide experience of chemical practice shows. So good indeed is it, that it is generally regarded as true. Yet one may be entitled to doubt whether there has ever existed a portion of common salt with *exactly* this composition. There are always traces of other ingredients present. In practice a sample of *pure* sodjum chloride is most certainly a figment of the imagination. It is a category into which we place common salt for certain purposes. So it is with all other pure chemical substances, and one requires only to encounter a situation in which the *impurity* present becomes significant for practical purposes, or in which the sodium temporarily breaks away from the chlorine, for the category to break down.

The idea of pure substances nevertheless represented a tremendous step forward in the theory and practice of drug

and chemical production. When it is discovered, however, that the category is true for certain situations, and false or inapplicable for others, that is the indication that a new advance is being registerea.

The Conflict of Measurement

Science is a by-word for precision in measurement, and indeed it is sometimes claimed that unless a quality is capable of being accurately measured it cannot fall within the field of scientific study. Yet, there never has been a precise measurement taken in science, unless it has consisted of some such simple process as counting the number of chairs in a room, or the whole number of objects present in any situation. A group of experimenters may make the same test as carefully as possible; if they obtained *exactly* the same answer it would be considered extraordinary. Here then they are presented with several conflicting numbers obtained under the most carefully controlled conditions, purporting to measure the same thing. All these numbers have equal validity; all must therefore be accepted. Experimental science is based on this type of contradiction. True, the numbers are not very different, but they *are* different; and yet they represent measures of the same thing.

"The same thing"—again a category is implied. Looking at the numbers, the obvious conclusion would seem to be that they are not measures of the same thing, but of different things. They are, in fact the same, and they are different. So we invent a theory, *viz.*, that there is a *pure* thing which has an *absolutely true* or precise measurement, but no one ever gets it! That is one category into which we fit the measurable experiences we have. There is another. We can say that we are dealing with a varied group, and evey time a measurement is made it corresponds to one of the members of this group. The totality is "the thing," and a study of how the numbers differ among themselves tells us about this statistical group. Thus if we say the category corresponds to a unique thing, having a true measure, then we must say that each experimenter commits an "error" in the conduct of his work. It is like an impurity in a "pure" substance. If we accept a category that implies something unique and absolutely *true*,

we are forced to deal with the opposite category *error*. The result found by any single experimenter is therefore true in the sense that it is a positive fact about the statistical group, and simultaneously false in the sense that it is an erroneous measure of the unique thing.

Dialectics has already warned us about the "either-or" attitude, and scientists, in true dialectical fashion, accept both approaches in their interpretation, using the one or the other according to circumstances. For some situations the statistical category is important, for others the unique category matters. To discover when one or other breaks down is to register an advance.

Theory and Practice as Categories

We have been talking about theories and contrasting them with practice. But to propound a theory is itself surely a very practical step. Every experimenter uses instruments, and it is through the theory of the instrument that the meaning of the measurement, made by its means, is understood. When the final measurement is given as the outcome of the whole experiment, it is therefore interlaced with theories about each part of the total complicated apparatus.

Every practical step taken with a part of the total apparatus rests on the theory of that part. The theory of each portion plays its part in the practical steps taken with the apparatus as a whole. It is in this way that we can see how closely interwoven are theory and practice. They form a closely knit unity. Thus theory and practice are themselves the separate categories in terms of which we are able to recognise how impossible it is to separate them in reality. By this act of forming these separate categories we bring out a theory of their unity.

All this is by no means restricted to science. Every small action we undertake rests on a multitude of assumptions which are in reality theories about the behaviour of the world. If we make a journey which involves travelling by train, we act on certain theories about the railway company, about the reliability of the train service, of the engine, etc., etc. A few moments' thought will show that everything we do is interpenetrated with a multitude of minor theories of which we are usually unconscious, and our actions would have no practical significance, in detail, unless they did indeed rest on

such detailed theories. We live perpetually in a world in which theory and practice are one and indivisible.

Subject and Object

Let us now examine the more fundamental categories into which scientific men divide up their subject matter, and watch how, as science itself has developed, it has been compelled to break down these categories. It is not by any means suggested that scientists have been conscious of the process they have applied, because, as we shall see, the changing universe itself has compelled them to make the necessary adjustments, as they have applied their categories to their paticular form of activity in that universe.

Perhaps the most fundamental category is that between Subject and Object. *We* look at *It*, the universe around us, and in doing so, separate out the activities, thinking and feeling, that go on in us, from those that go on outside us. In the first instance, therefore, we set out a sharp line of division between ourselves and the external world, and as if we were intact unchanging beings, we examine this external thing. It was through this separation, or this dichotomy as it is called, that the attention of Newton and his successors was focussed on the physical world as a thing by itself, and so led, by the interplay of theory and experimental practice, to the tremendous advance in science that is frequently referred to as Newtonian physics. In opposition to this, stand our internal selves, our feelings and our thoughts on the other side of the picture. Hence it is not surprising that we find Berkeley, towards the end of Newton's century, pressing forward a subjective idealist view of the universe, in opposition to the mechanical materialist view that had emerged out of the Newtonian approach. The attempt to explain the *whole* universe in terms of one of the categories—the object—led to the objective mechanical materialist standpoint, while the attempt to explain the *whole* universe in terms of the other category—the subject—led to the subjective idealist viewpoint, that denied the independent existence of everything except mind.

If we ask, however, in what circumstances this separation is true and in what circumstances it is false, we are naturally led to the philosophical outlook of the dialectical materialist. In this way we avoid the snares and pitfalls that

arise from the assumption of an absolute separation between curselves and the external world.

Mind and Matter

The two categories that we have described as subject and object, can be seen at once therefore to correspond to the categories *mind* and *matter*. It was in this way that these categories were reflected in the realms of science and of philosophy. But they had their social counterpart. Within the category of matter fell all those aspects of technical development that were so characteristic of the machine age and its utilisation for the growth of capitalism. The pursuit of the laws of material change grew with the practice of the laws of material production, and into this the human being, the worker, was compelled to fit himself as a cog in the machine. The period of human exploitation, as far as the worker is concerned, corresponds to his being classified as a machine. What was of importance was his output, his efficiency, and the expenditure necessary to keep this part of the machine functioning. The sharp separation of matter from mind, made it possible then to relegate the treatment of human emotions, and human values to the realm of religion and abstract philosophy. Thus on the one side stood industry and commerce, and on the other religion and the church, and the relative importance attached to these is manifest from the fact that the one occupied human attention for six days of the week, and the other for the seventh. The sharp dichotomy between mind and matter was reflected in the dichotomy between week-day and Sunday; and the refusal to mix religion with business.

By the time that science and technology in practice had begun to force the social changes with which they are related, on to the attention even of scientists, the social scene had so altered the way of life of the people that their very modes of thought had shifted. It was no longer possible to pretend that mental and material activities took place in self-contained independent compartments. The worker found that his Sunday thoughts dwelt all too insistently on his week-day grievances. He could not be a machine on week days if he was to be human on Sundays. The employer was finding that the human problems of the week days compelled his attention on

the Sabbath. The social categories that reflected the division between mind and matter refused to remain distinct. So also within the field of science itself. The social conditioning of thinking began to force its way to the front, and scientists were asking themselves how much of their scientific imagery, from which they formulated their scientific theories, was conditioned by the assumptions of the very society in which they were cradled. Thus begins the break-up of the original categories *We* and *It*, and the setting up of a new set of theories of science and scientific advance that links them up consciously with the social setting. The elements of Marxist analysis begin to be appreciated, that the material basis of society and of the world around cannot be separated from the ideas and interpretations it engenders in the minds of the dwellers and active participants in that world, and in that society.

Matter, Space, Time as Categories

We can now turn to the further categories that were made in the more detailed Newtonian analysis, so fertile for scientific progress, and examine how, as a result of that progress, these categories were themselves overthrown.

Astronomy was, of course, one of the earliest branches of science to be developed, mainly because of its importance in relation to navigation. It provided the necessary raw material for advance. Here among the heavenly bodies was the objective universe running its course unaffected by man; lumps of unchanging matter, now occupying this place, now that. Three new categories pressed themselves immediately to the fore: *Matter, Space, Time.* A piece of *matter* could be conceived as being anywhere in *space* at any *time.* They were separate and independent—so much seemed obvious. The extent of space did not seem to depend on the location of matter in that space. The passage of time in the Newtonian scheme was something in its own right, absolute and uniformly flowing, stretching backwards and forwards, to use a space analogy. Matter, its amount and denseness, surely could not be dependent on where it was, and when it was there. It is difficult to imagine that the distinction between three such sharply separated categories in nature could ever break down. Let us see.

In the first place it is clear that the erection of a distinct category—matter—in that form, necessarily would lead to a general principle, the Law of Conservation of Matter. In essence this stated that matter could be neither created nor destroyed, in any change that occurred. Whatever else changed, the total amount of matter in the universe could not alter. So also time could be neither retarded nor hurried. It moved uniformly. It conserved its own pace.

In the same way there might have been a corresponding principle—a Law of Conservation of Space—that space could not expand or contract—if such a law had had any significance in the Newtonian scheme; but as space was regarded as unlimited, such a law had no meaning. What it did say was that space was uniform. One part of space was as good as another. It conserved its properties.

These three categories, then, were to be the basis for all further explanation, and the world scheme had to be fitted into a logical pattern that satisfied the "independent" mind of man; that is to say it had to be non-contradictory—and everything had to be described by means of these three categories.

In such a statically conceived universe what had to be explained, of course, was change; not simply change in position, but changes in form, from solid to liquid, from liquid to gas; changes in temperature; changes in colour, etc., i.e., change in qualitative form and content in the restricted field of physical science.

Force: Cause and Effect as Derived Categories

Matter was localised in space and time. From this standpoint, therefore, explanation at first was restricted to answering the question, why a particular type of change occurred to matter, viz., changes in its speed and its acceleration. A new category *force* became therefore inevitable as the source or *cause* of the change; and this implies at once the cause-effect relationship, unique causes leading to unique effects. Thus *cause* and *effect* were derived categories, logically demanded once we accepted the original static categories into which the universe was assumed to be partitioned. From this as a logical necessity there follows at once a scheme of rigid determinism. Should these categories break down, therefore, we

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must expect a thorough-going transformation in the cause-effect relationship.

Let us look back for a moment at what we have just said. Here we have an inter-related universe in which change—before all else—stares us in the face. It is the fact of change that impresses on us the passage of time. Time is a category *derived* from change. An unchanging world would surely be a timeless world. When we enquire what it is that changes—when we ask, as it were, what is the nominative of the verb to change—we find one of the answers is matter. Matter changes. Matter as a thing in itself, dissociated from change and therefore from time, does not exist. Things other than matter also change. Thought changes for example, but for the moment we are not concerned with this. Matter certainly changes, in its form and shape, in its nature and properties, in its position and speed. Thus matter in that isolated sense is again a derived category, and to separate matter from *changing matter* is to falsify it. Moreover, when we talk about space we are really talking of a certain relationship that exists *between* pieces of changing matter. A space that was not associated with matter, devoid of matter, would be no space. It would be nothing at all, a figment of the imagination. Matterless space is only an idea, empty of real content. It would be as senseless to talk of spaceless matter. Thus we see that Space, Time and Matter are a unity that cannot be thought of as broken up into three constituent elements, separate and distinct, without trouble finally arising. That trouble will show itself when experiments are designed on the assumption of their separateness, and when the experiments do not give the results anti-cipated. The three categories will then have broken down, but the preliminary separation will have been valuable in that we shall have made advances in knowledge even on the false assumption. This is exactly what has happened.

Nevertheless, the initial partition of the universe into its three categories, with its causes and its effects, was an exceedingly fertile source of discovery. In an attempt to explain the results of scientific experience, it forced into being a new concept, that of energy—the state of agitation and of tension of any isolated system, a new category at first separate and distinct from the original space, time, and matter. In the

effort to cope with chemical experience, it compelled the formulation of the subsidiary category of *atoms* and *molecules*, in order to erect a theory of chemical change. This made possible a study of the internal energy of agitation of a mass of gas, regarded as consisting of atoms and molecules in rapid motion among themselves, and led to an understanding of heat—as a form of energy for the gas as an isolated whole, even although the gas as an entirety was not in itself in actual motion. Heat energy, therefore, was a group quality, that could flow from one gas to another or from one piece of matter to another, and that could be detected or visualised as the passage of an agitation from the molecules of the one body to the molecules of the other. Energy became a new category in its own right, localised in space, and capable of movement from one part of space to another just like a piece of matter. Thence followed the law of conservation of energy.

It was an interesting law, because it referred to a new group quality that had meaning even although the elements of the group were still little pieces of matter. It was important because it linked up the kind of simple straightforward properties of matter with which Newton was concerned, with other properties at a different level. It linked up, for example, with chemical changes, in which the properties of the constituent groups taking part in the change were completely transformed. If a piece of the metal sodium is dropped into water it bursts into flame, great heat is engendered, and the resulting material is neither water nor sodium, but a totally different chemical substance with properties different from those of the metal sodium or the liquid water. In this change, heat is evolved, and therefore the process involves an energy transformation. If the law of conservation of energy applies, what was the form of this energy before the change took place? Again all this is linked up with electrical phenomena. If an electric current is passed along a wire, the latter becomes hot, and may even become so hot as to give out light. If heat is a form of energy then the electric current has been a source of energy in some form, and if this is so, then the light emitted must also be a form of energy.

The dialectical process implicit in the breakdown of categories is now well under way. Here are heat, light, electricity, all outwardly separate types of phenomena. The derivation of the category, energy, for heat, from the idea of

matter in motion, links these together because they all show energy of this form—and yet in what sense can one say that light or electricity is matter in motion? It is not difficult to show that the passage of a beam of light or of a current of electricity does not involve the passage of matter, or even of the transference of a state of agitation of matter, in the ordinary sense. All these, then, are the same in their content as energy, but they are different in form, not capable of being thought of in the simple terms in which energy was first considered. The focus of attention is therefore being forced away from the matter itself, to the derived category energy, as apparently being more fundamental, an obviously dialectical point. *The original approach has become so fertile as to bring out its own limitations.* The question that forces itself to the fore is simply this: Is energy always a form or a property of matter, or is matter a form of energy? Is there a broader category that embraces all these forms of energy, and what is the status of matter in relation to it? What is the status of electricity and of light in relation to it?

The Disintegration of Matter

The answers to these queries are not to be evolved out of one's inner consciousness, but from experimental practice, pieced together in a logically and physically compelling form. These questions can be sharpened. What is the relation of matter to electricity? What is the characteristic property of matter that is of significance in connection with such problems? What is the relation of light to electricity and to matter? There is a series of such questions all of which in themselves suggest lines of investigation whose results must be crucial for the recasting of our physical outlook.

The answers began to be provided with the first discoveries on the disintegration of matter. All matter has inertia; that is to say when it is in motion, difficulty is experienced in bringing it to a halt, and when it is at rest difficulty is experienced in setting it in motion. This is a quality that is the same for all forms of matter; but one form of matter is in other respects very different from another. For the present purpose one such significant difference showed itself in the degree to which matter retained its form. Certain metals,

radium for example, were soon discovered to be unstable. They gave off electrical radiation, and at the same time broke down into other metals less heavy. This immediately established a linkage between matter and electricity, and led over a period of scientifically dramatic years to the discovery of the electrical constitution of matter. While heat energy, therefore, showed itself in the agitation of the atoms or the molecules of a substance, the atom itself was a bundle of electrical energy, that in certain circumstances could be made to break up and pour outwards. In this qualitative change the matter was transformed to electrical radiation. It did not disappear. In a sense it was a new form of matter. The apparent permanence had been undermined, and the old law of conservation began simply a statement, that, in certain circumstances, the matter in the universe could be expected to maintain a stable form, but in others could be expected to disintegrate. The law of conservation of matter had itself disintegrated. Now this law it will be remembered was a consequence of the separation of matter as a category standing in its own right; we must expect therefore that with this new development must come a complete overhaul of the original separation into categories of matter, space, and time.

What happened to the inertia of the matter when the latter became radiation? Did the inertia disappear? After all it was inertia that was the characteristic of all previous forms —solid, liquid, and gas. Does radiant energy also show inertia? The answer is—yes, as many experiments can demonstrate. A beam of light moves along a straight path, as a solid body may be expected to move, when it is far form other objects. When it strikes a surface it exerts a pressure arising from the fact that it is being compelled to change its path. This is evidently an inertia effect. There is however another significnat feature that is worth noting. The planets move around the sun—explained, as we usually say, by the force of gravity exerted between these two large pieces of material. Does a ray of light show a gravitational effect? If a ray of light passes close to such a large mass as the sun does it bend in its path? The answer is again—yes.

From this and a mass of other evidence we are compelled to admit that the old categories of space, time, and matter as independent entities have served their purpose. That purpose

was to outdate themselves, to make it possible so to carry through the study of physical nature as to bring out how limited were theoretical instruments with which the analysis was being conducted; and then to make necessary a recasting of the whole scheme, so that a new level of understanding could be attained.

Today, therefore, we return once more to the inter-related universe of Space—Time—Energy. In this, space is that in which changes of energy-flow occur. If the region over which these occur, expands, space also expands. Time is a relation between successive energy changes. Matter is itself a form of energy—one of many forms, and in place of the limited law of conservation of matter, and the older restricted law of conservation of energy, we have the latter, but in a more embracing form. There are circumstances in which it is satisfactory and convenient to regard space and time as separate and distinct; there are circumstances in which the more fundamental category has to be considered, space-time.

Finally certain consequences of the break-down of these categories must be noticed. Atoms and molecules were factual and convenient elements of matter associated with the first category.

While they are still factual and convenient in their own special circumstances they are no longer final and indivisible.

A train of light waves is no longer to be regarded as a disembodied and abstract beam of light. It is a mass of energy in motion which, because of its inertia, shows also the characteristics of matter. A beam of electrons is not simply a set of charged particles, but the carrier of electrical wave energy. An individual atom of electrical energy, taken as typical of the group, must be regarded as exhibiting the characteristics of a particle of matter, and of an electrical wave. Its behaviour will no longer be correctly expressed in terms of the deterministic framework of the separate categories of space, time, matter, but by means appropriate to that of a typical element of such a collective group, in which it may have the position and speed of any one of the members of the group. It will therefore be properly expressed by means of probability rather than by means of unique measures as if it were a single completely definable entity.

The crisis in physics and in the interpretation of modern science in general that has been a feature of the last twenty

years in the field, must be seen as the struggle that was proceeding to make a readjustment to far-reaching new categories as a result of the break-down of the older categories that had stood scientists in such good stead for so many years.

Recognition of Diversity

We have touched on only a few of the aspects of modern science that illustrate the categories of thought and analysis that have been set up in the past, and that have been broken down within recent years. It is not to be supposed that this has happened without repercussions being felt among scientific men. It is difficult for an outsider to appreciate the strength of the Newtonian tradition in science, and the way in which it had canalised their thoughts. Every problem tended to be approached from a deterministic angle. Every theory that has been formulated has been thought of as being either rigorously true or rigorously false. Everything was drawn in sharp outline. The classical picture of the atom of chlorine, for example, was always the same—something with a fixed shape and structure. Scientists tended to concentrate on the samenesses between the atoms instead of recognising also the possibility of differences that might in some circumstances become of first significance. Scientific laws are, of course, statements of regularities, and this implicitly stamps sameness as being of importance. The laws break down, or better stated, become inapplicable, when the circumstances are such as to force the differences to the fore. In these circumstances the category itself, that is in essence a statement of sameness, also breaks down. Speaking broadly, therefore, we can say that the reorganisation of our ideas of physical phenomena during the past twenty years has largely been a reflection of the fact that the diversity of nature has been more fully recognised, side by side with its uniformity in other respects.

Scientific Conservatism

Scientific men, therefore, have tended to fall into two camps. There were those who clung to the older categories of sameness, saw the world as entirely subject to law and order, believing that in the

end all so-called diversity would be shown, once knowledge had accumulated sufficiently, to fall within the purview of sharply defined law. To them the world was an entirely determinist affair, capable of being predicted in behaviour down to the minutest detail. These were the conservatives in science who clung to an outmoded method of approach that had served its day.

Scientific Anarchy

On the other hand, there was a second group who swung to the opposite extreme. To them the diversities in nature, the unpredictable, stood out. Scientific laws as they had been developed in the past were unreal, mere average effects, the result of the accidental concurrence of a multitude of confused jostlings of atoms or electrons. Everything was uncertain, accident ruled supreme; at any moment anything might happen. A kettle placed on a block of ice *might* boil. A monkey seated long enough at a typewriter *might* type out all the books in the British Museum. While probabilities might be attached to this or that event there was no sureness whatsoever. These were the anarchists in science.

The Crisis in Science

To the dialectical mind this *either-or* struggle is unreal. The universe is many-sided. It has its regularities and its irregularities, its order and its disorder, its knowledge and its ignorance, its certainties and its uncertainties. There are circumstances in which Space, Time, and Matter are fruitful separate categories, and others in which they are not. There are circumstances in which atoms can be regarded as all alike, and those in which they cannot. There are circumstances in which scientific prediction can be positive and definite, and others in which it is most appropriate to couch it in terms of probability.

But the crisis in physical science went even deeper than questions of theoretical interpretation. It brought up sharply the problem of scientific method in practice. For the experimental side of science rested squarely on the most fundamental of the categories we have discussed. viz., *We* and *It*, subject and object. It isolated the experimenter from the experi-

ment. It assumed that every scientific test could be conducted in such a way that the experimenter himself, although he had prepared the ground, was not involved. It is a commonplace that elaborate precautions are taken to prevent any "errors" creeping in as a result of the presence of those who are conducting the work. The process of nature that is under examination must not be vitiated by personal error.

Now it has always been obvious, of course, that the experiment has an effect on the experimenter. One of its objects is to produce that effect because he has to learn from it. Also the very fact that he sets up the actual conditions for conducting the test, means that he himself has an effect on it; but that is a very different matter from the point we are considering. In the last resort the scientist has to use his sensory organs for registering what is taking place. He has in particular to *see* and to *hear*. It is possible by mechanical means to enlarge the volume of noise so that a slight scratch or the footfall of a fly, may be so accentuated that it sounds like the tread of an elephant, but can we do the same kind of thing for sight? This is the crux of the matter. We can improve our capacity to see small objects and to study minute events by microscopes and ultramicroscopes, but there is finally a limit even to this. And this limit is set for us, with our powers of perception, by the structure of light. The small bundle, the atom of light energy, which we may seek to study can be seen if it emits a certain minimum quantity of this energy, and this has to enter the eye. In this emission the bundle itself receives a backward blow, recoils in fact, at the very instant at which it is making itself visible. The result is that the very process that consists in the object being visible, consists also in effecting a change in position and speed of the object, and such changes become very significant precisely when we are dealing with these sub-atomic particles on the basis of which one attempts to erect a deterministic theory. Stated otherwise this means that the kind of control that is usually exercised by the experimenter over the experiment is not present in such cases. The scientist himself becomes involved in the operation because he is an essential instrument in the experiment. It becomes impossible to disentangle certain aspects of *We* and *It*. The categories involved in scientific isolation are beginning to break down.

All this may seem very academic and of little importance except to a narrow group, but it has a very interesting social side. During the period between the two World Wars the two groups of scientific men who were struggling with this "either-or" attitude, suddenly broke scientific cover, and came out into the open with the object of explaining to the public at large exactly what the new science meant for the layman. It was the stirrings of a social conscience. It was a period of great distress, unemployment, hunger marches, under-nourishment, means tests, and the steady deterioration in the international situation that was leading to a new World War with all its unprecedented slaughter and destruction. The great contribution of these men of science to the solution of the human tragedy overshadowing the lives of a whole generation, was twofold. On the one hand they asserted, without a shred of justification, that the findings of science had established the universe to be after all nothing more than an elaborate piece of geometry, expressible in terms of mathematical formulae whose meaning could not be understood in detail. Of one thing they had no doubt. The Great Architect of the Universe was a Pure Mathematician. The sufferings of man, all too apparent to those who were suffering, were merely subsidiary elements in an elaborate geometrical proposition. Unable to overcome the sharpness of the categories *We* and *It*, *Subject* and *Object*, they provided a picture devoid of human content, at the very moment in human history when the problems of man were vital human problems. This section of scientific men, therefore, had no contribution to make to human welfare other than to deflect the minds of men from the crucial issues of their time.

On the other hand the inability of the other section to see the combination in nature of order and disorder, of certainty with uncetainty drove them to present a philosophy of life, based on this one-sided viewpoint, that was essentially defeatist. Since to them there was nothing sure in nature, fickleness reigned supreme, and confusion was necessarily its watchword. At the very moment when science and clear thinking on social affairs were of vital importance to find a way out of the gathering confusion, their contribution was to assert that confusion was inescapable because it was of the essence of nature. All order was fictitious.

Both standpoints were an evasion and a diversion. Both were blows struck at commonsense. Both were a negation of science, and unconsciously reflected the prevailing social and political defeatism from which the world was suffering. Both turned their backs on the human tragedy, and had nothing to contribute to its solution. Had these indeed been correct interpretations of science, the world would have been bankrupt; but the sun had already begun to set on that old-fashioned landscape in which science was seen as a pure mental venture, unconnected with the living situation in which it grows and develops. Technology had already made all too apparent the conditioning of science by social needs, and the special twists that society, at its various stages in development, had given to the direction of scientific advance. In this setting the collapse of the categories *We* and *It* was at last obvious. *We* are in *It*, growing and expanding with *It* and transforming it, as it transforms us and our ways of thinking. One requires only to look at the world of science to-day, to appreciate how the thoughts of scientific men have been canalised almost exclusively on to problems of war, a fact of profound social significance. The effect of this experience will most assuredly be felt in future on the theories and images they will call up in their efforts to resolve the problems of science that are later to be faced. These problems have widened in scope. They have outgrown the narrow confines of the laboratory, the planning of this or that experiment isolated from direct human intervention, and have turned to major social issues—the planning of science in the realm of social living, the most effective mobilisation of human energy for human welfare. Those whose minds are still bound by the past will resent this exodus from the laboratory, as a break with tradition. But men of broad vision will see at once that this exit means entrance into the social laboratory where the science of social life, the discovery of the laws of social change, and the devising of the means for bringing these changes into being, are tasks thrown up for solution to-day by social needs just as surely as were the more narrow scientific problems of two and three generations ago. It is to that branch of science that Marx made his great contribution.

CHAPTER FOURTEEN

HISTORY IN THE MAKING

The history of capitalism clearly shows the action of the dialectical process. As its practical logic unfolded, it slowly called into being a working-class movement that sought to organise and protect itself against exploitation. It was inexperienced, uncouth, often mistaken in its tactics and its strategy. The Luddites, the Chartists, the struggles of the 1840's and 1850's on the European continent, the Paris Commune, the 1905 revolutionary movement in Russia, all these bore witness to the birth pangs of something which capitalism was itself creating. Each of these naturally, in itself, failed to achieve a resolution of the problems that aroused it. Taken together they constituted the mass reaction of the working class in the field of practical politics. As the momentum of the process developed, with bitter experience of oppression and repression, there emerged from this practical struggle a theory of revolutionary activity, with an ever clearer scientific outlook on social change. In the Communist Manifesto of 1848 a sharp statement of the nature of this struggle is set out by Marx and Engels, and its historical significance evaluated. It stands out as the most revealing and searching description of the history of class exploitation that has ever been penned.

The power of the written word was early understood by all parties in this fight. It was Charles I who sought first to curb the use of this new weapon. Printing presses and type foundries were strictly limited by law, and vicious penalties were imposed for publishing matter not approved by the "King's Licencers." Later, Queen Anne introduced the Stamp Tax on newspapers, which made it impossible to produce a cheap paper legally. From 1819-1830, a critical period in British history, the tax was 4d. on any paper selling for less than 6d. In this way it was sought to put the printed word beyond the reach of the people. When the struggle developed between the growing capitalist class and the corrupt court of George III, supported by the landed gentry, the freedom of the press became a real issue. It was John Wilkes, re-elected

to Parliament five times while in prison, who with his associates, won the right of Parliamentary reporting.

It was natural that the early struggles for press freedom were fought by the capitalists. To them, however, freedom meant their own liberty of action *vis-a-vis* the aristocracy and the landed gentry. The enclosures of the common lands drove the peasants into the towns as a source of labour for the Industrial Revolution. Hence, as the working class itself sought the rights of freedom of speech, of meetings and of printing, acts were passed by the new capitalist class simiiar to those they had themselves fought. In addition to the Combination Acts, there were the "Gagging Acts" of 1817-1819 increasing the penalties for "seditious libel," and heavy stamp duties re-imposed on news papers. With the rise of the Chartist movement the Stamp Tax was deliberately flouted, and in 1830 *The Poor Man's Guardian* was published, unstamped, by Henry Heatherington who helped to found the first successful trade union. Chartism owed much to this paper and its successor, *The Twopenny Despatch*. These were, in effect, the forerunners of the underground press in the occupied territories of Europe today, and the struggle they reflected was the early stage of that same struggle that has now broadened out in scope to cover the whole habitable globe.

Today there exists a vast literature of Marxist thought and analysis in philosophy, economics, art, science and politics, that is avidly read by people of the left all the world over. The fact that this has no official place in the orthodox compendia of literature and philosophy in libraries and universities outside the U.S.S.R., is no more than a reflection of the fact that basically the world is divided into capitalist and socialist sections. Today it is possible for individuals in every country, outside those still under Nazi domination. to trace the growth and development of Marxist thought among their own writers and theoreticians by scanning the long lists of books and pamphlets published, in the face of intense opposition, by those who cared nothing for official disapprobation, because they knew that what they expounded would finally become accepted truths.

We are living in a new pamphleteering age, Adults, having had all the schooling that education in modern capitalist states gives them, find that they have no basic understanding of the major events of their times. They are not

equipped to see the social and political meaning of movements that they are called upon, often at great sacrifice, to support or to oppose. They want to know both the underlying principles and the facts. Neither of these is provided for them by the educational system. This is not surprising, for capitalist society is more directly concerned with the creation and the acquisition of surplus value than with anything else. It rests, as we have seen, on the appropriation of this surplus. Anything over and above the creation of the conditions to maintain this, is secondary. Above all, it certainly does not encourage the working class to appreciate this very situation. If, therefore, hand and brain-workers are not wholly ignorant of the signgificance of social and political events, this arises from the fact that since they take part in the making of these events, they acquire an experience from which they finally draw lessons. In a period like the present, whether the pages of history are crowded with significant events, it is natural, therefore, that men and women seek equally quickly to assimilate the general principles that are working themselves out in their daily life. Hence the demand for more and more pamphlets; and the evidence that this is true lies in the phenomenal sales that these pamphlets show. Side by side with this has to be set the vogue in Soviet films, in politically satirical and politically revealing plays, and the outburst of political song-writing and of music of social significance. This is part of the present changing ideological outlook that grows among the people as a result of the changing material circumstances through which they are passing today. The social jolt we are receiving makes us sit up and take notice.

These works are not written for personal profit. They are produced by men and women who, believing sincerely in what they write, and feeling the need for education and understanding among the masses, compose and sell these writings at great personal cost. They are part of the same section of people, the Communist Party who throughout the past critical ten years or more have, broadly speaking, been right in their analysis of the historic events of that period, and despite vilification, have steadfastly adhered to these judgments. It was they who exposed Italian Fascism from its very inception. At great self-sacrifice they worked in every country for the release and the rescue of the victims

of fascist brutality during the castor oil days of the Mussolini dictatorship. It was they who saw the true meaning of Nazism, pointing out the financial relations between the German industrialists and the Nazi Party, and bringing out its inevitable drive towards war. And all this happened when the leading lights of certain other political parties in this country, and in France, were wooing Hitler, granting loans for re-armament, and talking of the marvellous discipline Hitler had brought to the German people. It was they who stood up to Mosley and his Blackshirts at their meetings here, taking maulings and ill-treatment in order to bring home to the people of this country the true role of these degenerate quislings. If this was not patriotism, it is difficult to give a meaning to the word. It was the Marxists who provided a rational understanding of the successive waves of anti-Semitism throughout history, who exposed the way in which it was being fomented in this country in order to break up the unity of the people, so that, by internal strife. we would be weakened in our effort to ward off the attacks of the fascists and the Nazis. Those who at last appreciate the reactionary purpose of this form of race antagonism, have them to thank for this understanding. It was they who knew the strength of the U.S.S.R. in the long years before the war, understood her democracy, appreciated why she was strong, and pressed time and again for an alliance between the democratic countries, in order that the threatening power of the Nazis might be quelled so that war might be averted. When Chamberlain, rebuffing the U.S.S.R. and the Czech government went to Munich with Lord Halifax to shake hands with the arch-criminals Hitler and Mussolini, and to hand over a democratic and powerful people, Czechoslovakia, bound and gagged with all its industrial and armament production, its tanks, its aeroplanes, and its magnificent Skoda works—who but these Marxists and their allies were foremost in organising protest meetings, *in advance*, up and down the country, because they understood only too well to what the policy of the Chamberlain government would lead? While the British Goovernment and its ally, the decadent French Government, played non intervention with Republican Spain when it fought to the last ditch against fascist and Nazi intervention, who but the Marxists exposed the true significance of this act of aggression and the inner meaning of the policy of the British Gov·

ernment that held the ring for murder? Who were the leaders of the International Brigade but young Communists good sound craftsmen, talented creative artists and scientists? And were they not the first to shed their blood in the struggle against the fascists and Nazis? Was their patriotism not betrayed by the reactionary policy of governments that had their own reasons, well understood, for desiring a strong Nazi state to face eastwards against the Soviet Union?

Today all this is not yet fully appreciated. People do not see how the contradiction within capitalism was driven ever deeper in these years. Many people and most political parties do not like to be reminded of how they misread the signs of a whole decade of international fireworks. One requires only to compare our pre-war policy towards the U.S.S.R. with our policy to-day, to realise how completely the orthodox parties have turned somersaults. One is surely entitled to ask to what extent the fact that this somersault came so late, contributed to the catastrophe that has befallen the world. On these matters the record of the Marxists is clear and unwavering. They saw where the contradiction lay. Never throughout these difficult years have they hesitated in their exposure of the dangers of Nazism, and in their assertion that the peace of the world can be secured only by strengthening democratic forces at home and abroad, and by alliance with other democratic powers, including the Soviet Union. They alone have shown consistent scientific understanding of political situations.

Confusion still exists. Many who have come at last to understanding the meaning of the Soviet-Finnish war still do not appreciate the historic significance of the 1939 German-Soviet Peace Pact. They have conveniently forgotten the gibe "Communazis"—a bastard term if ever there was one. They do not ask themselves how the Soviet Union came to be so well prepared to meet Nazi aggression when she herself had admittedly no aggressive intentions. They have forgotten how closely Britain came to waging *two separate wars simultaneously*, one against Germany, and another and different war against the Soviet Union at the time of the Soviet-Finnish struggle. Where, indeed, would Britain have been, and what would have happened to freedom, if the Chamberlain policy of sending shells, aeroplanes and many divisions to Finland had been persisted in, at a time when, weak as we now know we

were, we had had also to face the armoured might and the relatively vast air fleets of the Nazis? Such was the dangerous *impasse* into which the contradictory policy of the Chamberlain government was leading us. The people of this country will not easily forget the fantastic stories of Soviet weakness on which we were fed at that time. Marxists saw only too clearly how beautifully it fitted into the pattern of a "switch the war" policy. We have the Soviet Union to thank for its tactful handling of a situation that was fraught with such disaster to the democracies of the world, for it saved the situation, and the people of this country, by rapidly making peace with the Finns.

In precisely the same way it saved us by the German-Soviet Pact. For that Pact came at a moment when European war and the over-running of Europe was already a foregone conclusion. That was obvious to all politically understanding people, for the arming of Hitler and the handing over to him of the strategical key points, war factories and sources of material in Europe, by successive steps of appeasement, had placed him in a position of sucessfully striking where he cared—except at the Soviet Union. Had he struck there, as the earlier Chamberlain policy of support for Germany was designed to achieve, the *rapprochement* between this country and the Nazis would have moved forward into the closest collaboration. From what is now evident to everyone of the intentions of the Nazis, Britain would have slipped into the grip of the Gestapo. Freedom would long since have vanished from the lives of those of us who survived. The German-Soviet Peace Pact did indeed switch the war. It clinched the decision that in the first instance the war was to come in such a way as to force Britain on to the anti-Nazi side. It meant that Britain was thereby destined to be forced along the path of democracy, because it had perforce to fight a fascist state, instead of along the path of fascism and reaction, by aiding and abetting the gangsters. This did not mean that the Chamberlain Government, with its wrecking tactics that destroyed democratic Czechoslovakia and abetted Franco's rise in Spain, had suddenly become democratic overnight. On the contrary, the fact that it led us soon afterwards at the time of the Soviet-Finnish war to the verge of war with the Soviet Union, showed how unchanged was its colour. It is in

the light of all this that we have to view the "phoney war" period.

It is still not clear to most people how misrepresentative was the character of the Chamberlain government, for while the British people themselves, once war had broken out, had become very strongly anti-Nazi, the government that was leading the nation in this war was by no means imbued with genuine democratic feelings. Who can say what would have been the result of the visit of Hess had the Chamberlain government, instead of the Churchill government, been in power? The German offer to switch the war came too late, for by that time the successive disasters that followed logically on a policy of appeasement that strengthened Germany and weakened Britain, had swept this dangerous pro-fascist government from power.

Only the politically naive will imagine that the recent war commenced on September 3rd, 1939. From the date of the invasion of Manchuria by the Japanese—justified by Sir John Simon at the subsequent gathering of the League of Nations—the march of the Fascist gunmen could be heard throughout Europe and Asia. The German entry into the Ruhr, the occupation of Austria, the rape of Czechoslovakia, Abyssinia, Spain, the British-German naval agreement, the repudiation of the Soviet-French alliance under pressure from the British government, the supply of copper, steel, pig-iron, and aeroplane engines to the Hitler government by British and French manufacturers up to the very moment of the outbreak of war; against this the supply of arms by the U.S.S.R. to Republican Spain, and to China in her struggle with the Japanese, the efforts of Litvinov to unite the democratic powers under the slogan "Peace is Indivisible"—these are but a few items in the story of the most desperate reactionary bloc the world has ever experienced. No country was immune from this war which has lasted already many years. The actual date at which hostilities commenced in any one quarter is immaterial, for it was a war with an old strategy—one in which the Fascist bloc sought to deal with each of its enemies separately. In this it all but succeeded. Looking back on that period now, it is evident that until September, 1939. unrealised by the British public, the government's policy made it a tool of this reactionary bloc. The Soviet government,

on the other hand, stood four-square against the aggressors.* From September, 1939, until the defeat in Norway, the Chamberlain government, still composed of appeasers and Men of Munich, found itself in the equivocal position of formally being at war with a government with whom they would rather have been allies, and bitterly opposed to the U.S.S.R. with whom the commonsense of history and military power demanded the closest alliance. The Churchill government entered office with two powerful disadvantages. On the one hand in inherited the suspicion of the shattered relics of democratic Europe with regard to the policy of Britain. It was faced with a U.S.S.R. that, at that time, had lost all faith in the good intentions of so-called democratic Britain. On the other hand inherited a government in which the Men of Munich still reposed serenely in their official positions, waiting to sabotage all efforts at good will with the only power in Europe strong enough to face the might of Nazi Germany. Churchill, an experienced politician, trod warily, but nevertheless still allowed friction and heat to be engendered in retaining in British ports, ships claimed by the U.S.S.R. as her own. Then on June 22nd, 1941, came the dramatic turning point when Hitler, realising his inability to clinch his successful conquests so long as the U.S.S.R. held the major part of his army and air force paralysed on the Eastern Frontier, struck against the U.S.S.R. with all his might. Had he been free in this respect nine months earlier, the Battle of Britain, brave as were its defenders, might well have had a different outcome. Immediately, Churchill seized the psychological opportunity in that at long last he clinched the alliance that had been the primary purpose of the left for so many years. In the light of these events how foolish is the suggestion that the U.S.S.R. did not begin the fight against the Nazis until she was attacked.

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* "Russia was faithful to the very last moment. Only Russia was ready to come to our assistance, but we were left in no doubt that a war waged by Czechoslovakia with Russia at her side would not be a war against Germany alone. The whole of Europe, including England and France, would have taken up the attitude that such a war . . . was a war of Bolshevism against Europe."—Dr. Benes, interview to American Press, April, 1939.

In these ten years, therefore, the British government passed through the following phases:—

(1) Pro-Nazi and anti-Soviet.

(2) Anti-Soviet and nominally at war with the Nazis, but suspected of a desire to switch the war against the U.S.S.R.

(3) Pro-Soviet and anti-Nazi.

In this situation what policy could genuine anti-fascists pursue? In the first phase the answer is obvious. They were anti-government, and, in spite of vilification, anti-Munich, anti-appeasement, and pro-Soviet during the days of the German-Soviet Pact and of the Finish war. These were difficult days, but the outlook was clear, consistent and correct. The criterion adopted was a simple one—was the government prepared to implement an alliance with the Soviet Union? The sooner this could be achieved the more certain was the power of the united democratic forces likely to prevent an outbreak of war and slaughter. German Nazism could be choked *inside* Germany. In the second phase, therefore, they were bitter that all their efforts to force unity with the Soviet Union had failed, and that instead a "phoney" war had broken out in which the genuine anti-Nazi feelings of the British public were being distorted and confused by violent anti-Soviet bias. The invention of the term "Communazis" remains as a symbol of this period. Genuine anti-fascists, therefore, had no option but to press:

(a) For the removal of the Chamberlain government and its Men of Munich, and their replacement by true anti-fascists and democrats.

(b) For a full alliance with the Soviet Union, so that even at this late hour the remaining forces of democracy might be rallied.

If these could be achieved in a genuine spirit, it was believed that even then a peace could have been enforced on Hitler that would have led by steady pressure to his elimination and that of his Nazi accomplices from the affairs of Europe, without the welter of blood and destruction which threatened the world.

It was a difficult policy for which to press, but looking back on it, with our knowledge now of the consequences of leaving the Chamberlain government in office, and so accentuating their policy of estrangement from the Soviet Union,

and bearing in mind the tremendous tower of strength the Soviet Union has shown itself to be, who would dare say today that that policy was misconceived? And is it not obvious that those who advocated this policy did so because they saw it as the correct anti-fascist and therefore as the most patriotic line to adopt?

The third phase began to dawn with the replacement of Chamberlain by Churchill, but without the elimination of the Men of Munich from office. It had to handle the successive disasters predicted by the left as a consequence of appeasement, and it had yet to prove that in fact it was genuinely anti-fascist and anxious for active collaboration with the U.S.S.R. A mere change of head could not imply this. Action alone could count. As soon as Churchill made his famous pronouncement on June 22nd, 1941, the two factors for which the left had pressed were immediately achieved, and their fullest support was accorded to the government. In this new phase the war could now become a genuine struggle for liberation.

History will recognise the completeness with which the Marxists saw this complex and developing situation, and how they pursued their patriotic anti-fascist policy in the earlier stages in the teeth of vilification and persecution. It will also record with shame the steps that were taken to confuse a democratic people like the British by the pretence that fascists and communists on the one hand, and the German Nazi State and the U.S.S.R. on the other, are indistinguishable.

If the recent war is to be seen for what it was, one waged against the dictatorship of fascist and Nazi capitalist states over the peoples of the world, then we must notice that the U.S.S.R. had been in this war long before other democratic states had decided to pursue an anti-fascist policy. Even as late as September 3rd, 1939, it was impossible to say that the hostilities that had broken out, implied that the Chamberlain government was in fact anti-fascist in character. It was not until June 22nd, 1941, that Mr. Churchill definitely swung Britain on to a course of a thoroughly democratic and anti-fascist character.

Marxists in Britain have had difficulties to face that have been of two types. On the one hand they have had to keep a clear understanding of the main trend of events the world

over as a background against which to see the detailed confusions of a complex and highly disturbed period. This they have been able to do because of their appreciation of the meaning of social and historical change, and in particular of peculiar and devastating manner in which these changes are taking place today, and the reasons why they have taken this form. On the other hand the power and control over the organs of public opinion—the Press, the B.B.C., education in its many forms have been exercised by other mainly antagonistic to their viewpoint. Every movement they have led, every poster, every pamphlet they have produced, every meeting they have held has to be seen, therefore, as an educational struggle to bring light to the masses during this period of darkness.

Their task has been simple, however, when seen side by side with that presented to the Communist Party in the U.S.S.R. during the past quarter of a century. For they had to devise and carry out the strategy and tactics of the Revolution. They had to arouse the people in self-defence, and in defence of the Revolution against the half-dozen armies, or more, that were launched by the White Russian Generals and their capitalist allies against the young embryonic socialist state. This they carried through successfully. They had to be the driving force behind the economic, educational, and scientific programme during the period of construction, feeling their way amidst the mass of traditional opposition exerted by the relics of the petit-bourgeosie and the peasants. They had to be shock brigade workers and the educators. They had to show an example, by work and steadfastness, of what was expected of everyone during the difficult times that lay ahead. They had to understand the political movements that were taking place outside their frontiers, and devise plans and programmes not only for the building up of their industry, not only for settling its location. but for integrating it with plans of defence in the event of an attack. They had to ensure that the people would grow to trust the judgment and understanding of their leaders, so that when the supreme test came they were able to stand as one man and defend their soil and their socialist state. They had to apply with clarity and skill a policy that would meet the needs of the numerous nationalities that fell within their

frontiers, and unify them in an international federation, that would at one and the same time admit of the development of national cultures side by side with an integrated economy. They had to be the spearhead in each and every form of attack. In this way they have provided leadership within the U.S.S.R. to their own confederation of nations in the task of building up and defending a socialist economy. As they have done this they have provided leadership to the working class of every other country, showing by example and precept how their task can be performed. They have had to devise a revolutionary tactic and strategy in a war of an unprecedented scale and ferocity. And finally by their magnificent stand at all parts of the Eastern Front against the might of an organised Nazi Europe, they have shown at Kiev, Odessa, Sevastopol, Moscow, Leningrad, Smolensk, Voronezh and Stalingrad how simple ordinary mortals can, under socialism, be converted into millions of heroes. In undertaking these tasks they are giving practical form to the view that the period of pre-history has passed; that the time has come when it is possible, by bringing to bear the fullest knowledge in science, history and philosophy, to shape the future of man in a consciously planned way. The whole of this vast sphere of activity, especially during the past 25 years, based as it has been on dialectical understanding, stands as the practical guarantee of the correctness of that philosophical approach as a guide to action.